POLICY ON DRIVE-IN THEATERS

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COMMITTEE ON TRAFFIC

SUBCOMMITTEE ON ROADSIDE CONTROL

PREPARED WITH THE COOPERATION OF

NEBRASKA DEPARTMENT OF ROADS AND IRRIGATION

1949

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AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS

COMMITTEE ON TRAFFIC

SUBCOMMITTEE ON ROADSIDE CONTROL

MEMBERSHIP:

Chairman — J. E. Johnston, Traffic Engineer
Department of Roads and Irrigation
State Capitol
Lincoln 9, Nebraska

A. R. Harvey, Jr.
Engineer of Highway Planning
State Highway Building
Montgomery 4, Alabama

W. B. McKendrick, Jr.
Assistant Chief Engineer
State Highway Department
Dover, Delaware

E. L. Mathes, Traffic Engineer
Bureau of Highways
Idaho Department of Public Roads
Boise, Idaho

H. H. Harrison, Traffic Engineer
Illinois Division of Highways
Room 416, Centennial Building
Springfield, Illinois

Claude R. McCamment, Safety Engineer
State Highway Commission of Kansas
Topeka, Kansas

E. F. Copell, Traffic Engineer
Department of Public Works
100 Nashua Street
Boston 14, Massachusetts

David L. Fosburgh,
Highway Planning Survey Manager
State House Annex
Concord, New Hampshire

Charles R. Waters, District Engineer
Department of Public Works
65 Court Street
Buffalo 2, New York

Maurice Cline, Highway Planning Survey
Department of Highways
Capitol Office Building
Oklahoma City 5, Oklahoma

C. A. Rothrock, State Planning Engineer
State Road Commission
Engineering Department
1340 Wilson Street
Charleston, West Virginia

Consultant — David R. Levin
Public Roads Administration
Washington, D. C.

PREFACE

The Operating Committee on Traffic was established in the general committee reorganization action of the Executive Committee in 1946, and has since engaged itself on a program designed to benefit its membership, the Association, and the traffic field generally. Recognizing the value of statements of Association policy on traffic operation matters, the Committee on Traffic has been working on several projects of importance to highway officials throughout the country.

This "Policy on Drive-in Theaters" is the undertaking first completed. It deals with a traffic problem that is only now emerging in its full proportions, and the solutions recommended in this report, based on intensive study of several hundred drive-in theaters, are therefore most timely.

The Subcommittee on Roadside Control, led by its energetic chairman, Mr. J. E. Johnston, Traffic Engineer of the Nebraska Department of Roads and Irrigation, may be credited with the origination and completion of this project. The text, though largely the effort of Mr. Johnston, reflects many ideas and suggestions of other subcommittee and committee members. It has been thoroughly reviewed in the member State highway departments and was officially approved by the Association on April 7, 1950.

Other topics to be dealt with in similar fashion by the Committee on Traffic concern speed control, other features of roadside access control, uniform traffic control devices and selected phases of the urban traffic problem. Criticisms or suggestions relating to the material contained herein or to other subjects in the traffic field are welcomed and should be submitted to C. W. Prisk, Secretary, AASHO Operating Committee on Traffic, Bureau of Public Roads, Washington, D. C.

INTRODUCTION

The American Association of State Highway Officials, Committee on Traffic Sub-committee on Roadside Control undertook in 1948 as its immediate objective a study of the drive-in theater situation. Although the Sub-committee is interested primarily in the development of standard driveway designs and control measures for all types of roadside establishments, due to the rapid growth of drive-in theaters all over the nation the Committee felt that this type of roadside establishment should receive its first attention. Questionnaires were circulated to all state traffic authorities, (A copy of the questionnaire is included in the Appendix.) Replies were received from 37 states plus the District of Columbia and the Territory of Hawaii, and included important data for 247 drive-in theaters which were in operation at that time. A preliminary report in which this data was analyzed was presented on September 23, 1948 before the Committee on Traffic at the annual meeting of the Association held in Salt Lake City. The main purpose of the preliminary report was to obtain from the entire Committee on Traffic their reaction as to the justifications for the preparation of a final report on this matter. The Committee was unanimous in its approval of this project and recommended to the Sub-committee on Roadside Control that the final report be completed as soon as possible.

In continuing this study the Sub-committee on Roadside Control circulated supplementary questionnaires dealing with the administrative and legal authority. The original questionnaires covering the detailed information for individual drive-in theaters was resummarized due to the receipt of 35 additiona. cases. In addition members of the Sub-committee were asked to make on the site traffic studies of a number of typical drive-in theaters in their vicinity

In order to obtain peak conditions it was necessary to make these "on the site" studies on Saturday or Sunday nights.

The data presented, conclusions reached, and the recommendations set forth in this report are based upon the factual observations of drive-in theaters which were in operation at the time the study was being carried on.

The Committee wishes to acknowledge the efforts of those individuals all over the nation who have so willingly assisted in the gathering of data required to make this report possible. Much of the information required has not only necessitated considerable effort in compilation and tabulation in the office but has also required extensive field studies. Inasmuch as the participation has been nation-wide and nearly all of the forty-eight states were included, individual recognition would be difficult. The Committee wishes, however, to recognize the valuable assistance rendered by Mr. David R. Levin who has acted as Consultant on matters relating to legal control and administrative authority. Mr. Levin's services were made available through the courtesy of the Bureau of Public Roads.

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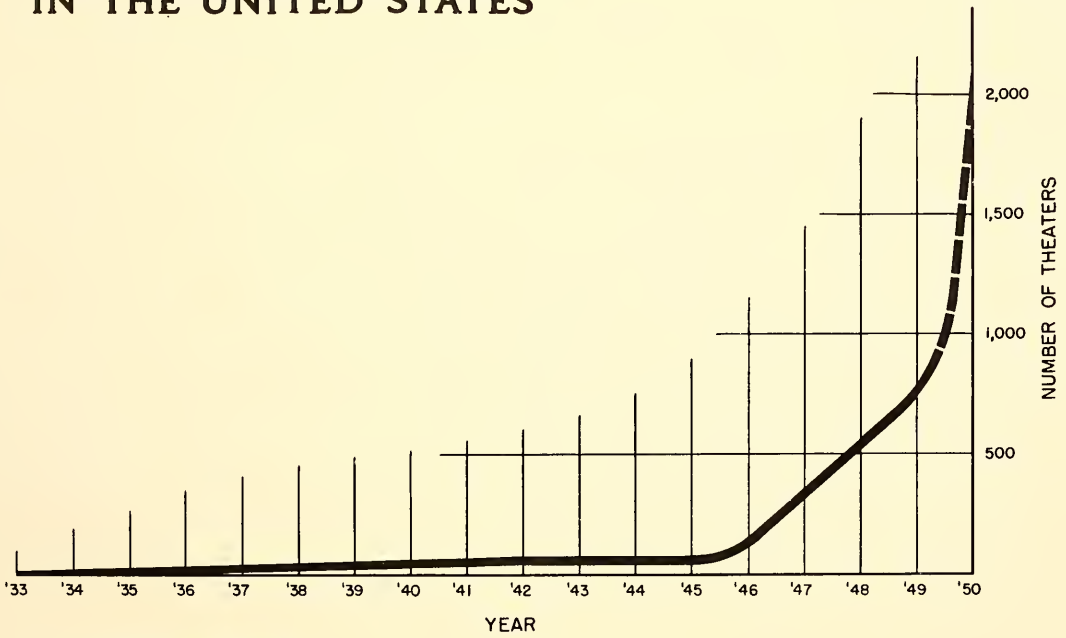
GROWTH IN NUMBER OF DRIVE-IN THEATERS IN THE UNITED STATES

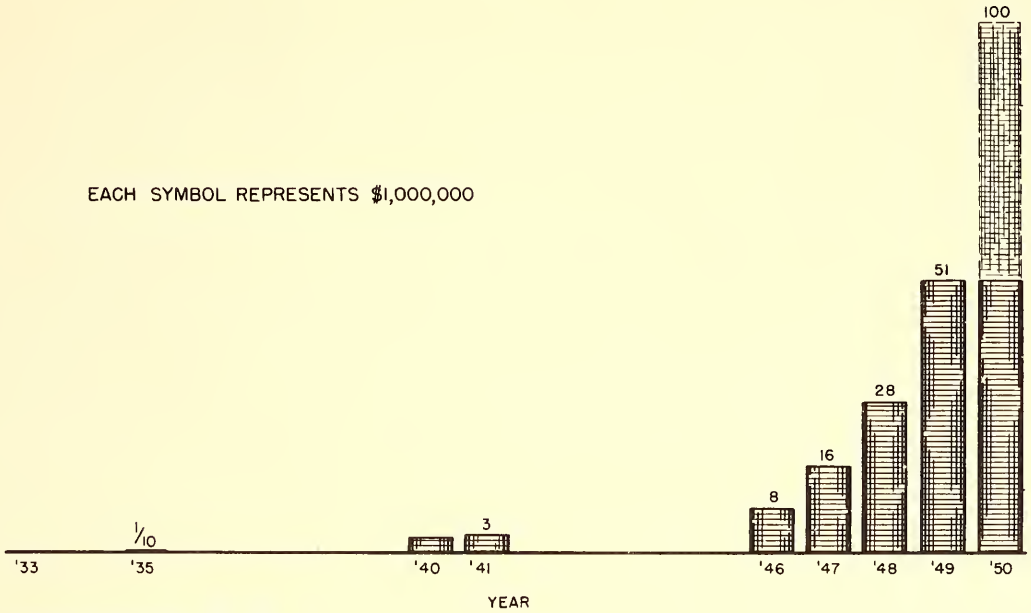


SOURCE: READERS' DIGEST, SEPT. 1948
BUSINESS WEEK, JAN. 1, 1949
TIME, JUNE 20, 1949

A. A. S. H. O. Committee on Traffic

Sub-committee on Roadside Control

GROWTH IN DOLLAR VOLUME OF BUSINESS OF DRIVE-IN THEATERS IN THE UNITED STATES



SOURCE: READERS' DIGEST, SEPT. 1948
BUSINESS WEEK, JAN. 1, 1949
TIME, JUNE 20, 1949

A. A. S. H. O. Committee on Traffic

Sub committee on Roadside Control

CHAPTER I

THE PROBLEM

With the advent of the modern open air drive-in movie theater, a unique traffic problem has been developed on America's streets and highways. A brief analysis of the history of this type of roadside attraction may help to determine whether or not this recently developed problem is of a temporary nature or the beginning of a serious and permanent traffic pattern.

The beginning was modest enough - - a 400 car drive-in theater in Camdon, New Jersey opened during the summer of 1933. It had one ticket booth, one entry gate and one exit (both floodlighted), a 60 foot screen set in an asbestos stage, and "controlled directional sound" supplied by outside air horns which could be heard "over 100 yards from the screen".(1) Vehicles were parked in 7 rows on ramps graded to 5 percent, the rear row being 500 feet from the screen. The aisles were 50 feet wide with the projection booth in the center of the front row. The screen faced away from the highway, and on it were shown three shows nightly. Several attendants directed traffic.

Basically, the pattern for this first drive-in theater and its operation remains unchanged today except for size and added auxiliary services. The ide of combining two of America's favorite pleasures, the motor-car and the movies seems to have caught on rather slowly at first. There were only 52 theaters operating at the beginning of World War II in 1941 with 62 more being planned. By then, drive-in theaters were a 3 million dollar annual business. Postwar years, however, brought a rapid increase in popularity, many new improvements in equipment and services, and a sudden and rapid rise in the number of drive-in theaters opened for operation. By September 1948, there were

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(1) Literary Digest, July 22, 1933; Business Week, August 5, 1933; Popular Science, August 1933; and Popular Mechanics, September 1933.

546 drive-in theaters with a capacity of 275,000 vehicles seating 825,000 persons nightly and doing a 28 million dollar annual net business. Film rental cost was 5 million dollars annually, and the drive-in theaters were seating 1/12 the capacity of the indoor theaters. By January 1, 1949 there were 756 open; by June 1949 there were over 1,000 in 45 states, and prediction by the motion picture industry are for more than 2,000 by 1950 with a capacity of over 600,000 cars and a daily audience potential of 7 million persons.

Despite a business slump of 20% for indoor theaters in mid-1949, the drive-ins showed a 10% increase. Operators attributed this, in part, to the belief that drive-ins appeal to a different group of patrons from those attending indoor theaters--the aged or infirm, the workman who does not wish to dress up to see a movie, and the family to whom saving the costs of a baby-sitter and child admissions are wothwhile considerations.

Although establishing a new drive-in theater is not a shoestring proposition (one 600 car eastern driver-in theater cost $300,000 to open), they can be built at less cost than enclosed theaters normally found in the city. A deluxe theater house will cost from 250 to 300 dollars per seat, plus parking facilities if any at all are available, while a drive-in costs only 100 to 150 dollars per paid seat with no further parking worries.

Drive-ins are now booking new, first rate films instead of the moth-eaten left-overs of a few years ago. Smart operators have developed advertising billboards to an extreme degree of elaborate attaction, and have succeeded in making the refreshment stand and other services pay for operation expenses. The added services now offered to patrons while the show is on or during intermission add up to an impressive list, headed by the always popular refreshment stand and supplemented by baby bottle warmers, children's playgrounds fully equipped, dance platforms, laundry service, dog kennels, picnic areas, merry-go-rounds, shuffleboard courts, car wahing, nightclubs, golf

driving ranges, shetland ponies for the kiddies to ride, barbecue pits, motorized bingo (jackpot to right speeedometer mileage), glycerine compound for rainy windshileds, DDT for mosquitoes, fog filters, "moonlighting" from central lighting units, individual car heaters, and lately, car cooling units have been proposed. Most drive-in theaters now use individual car sound speakers with low-volume horns supplying sound to the refreshment stand and other service areas. A trend toward the future has appeared at one eastern drive-in which parks 500 cars and 25 airplanes. The planes are taxied into position and after the show are towed by jeeps back to the airstrip adjacent to the theater.

Apparently, America has accepted the drive-in theater and it is here to stay. The problems which these theaters create in terms of street and highway operation are fixed factors which traffic authorities must face squarely and realistically. The problems cannot be coped with by ignoring them, by wishful thinking or by taking a defeatist's attitude. The situation needs a fair, common sense appraisal and the development of sound techniques from the level of legal and administrative authority, and design and operational policy.

What are some of the problems created by this new enterprise?

Nearly all drive-in theaters are located outside of towns and cities. This means that they are outside of the areas, in the main, where comprehensive land zoning could be utilized and more rigid municipal regulations as to traffic control would apply. The problem is one which affects state and county administrators primarily. Only four states out of twenty-three reporting indicated statutory authority to prohibit access to state highways and these were confined to special conditions. Eight states out of the twenty-three reported having comprehensive zoning legislation. The facts are that few states or counties have specific legal authority to regulate the location of any business enterprise or prohibit access to highways. The majority, however, do have

authority to control the location of the access facility somewhat and to dictate its design.

Lack of location control has resulted in 90 percent of the drive-in theaters being located on major highways. Furthermore, 46 percent of the theaters have been located on two lane highways, but 81 percent are located on highways carrying traffic volumes of more than 3,000 vehicles per day. This indicates that theaters are being located, in the main, on highways already overloaded and are dumping short time peak loads onto high speed highway facilities not well suited for absorbing such loads.

Thirty-two percent of the theaters reported are located on curves and twenty-eight percent on hillcrests where limited sight exists.

Fifty-eight percent of the theaters are held responsible for a loss of vehicle speed through the adjacent area on the highway. Speed reduction from normal characteristics varied from one to twenty miles per hour. This reduction in operation speeds represents the introduction of operating inefficiency in the section of highway involved.

One of the most common problems on major two lane highways is the backing up of vehicles due to left turn movements from the highway into the theater. Such problem results due to the inability of the left turn vehicles to cross the opposing traffic stream thereby stopping not only all following theater left turn traffic but all through traffic as well. Cases have been sited where such a problem has caused highway traffic to back up for more than one-half mile.

Theaters have been located on sections of two lane road where normally vehicle speeds range from 50 to 70 miles per hour and where no other marginal development previously existed. This creates a new area of congestion and a potential traffic accident prone location. Such situation throws together in

one traffic stream high speed drivers on long trips and low speed local drivers. This is a combination which breeds impatience, irritability and actually conditions due to speed differential beyond the ability of many drivers to adjust themselves.

Exit movements although much more highly concentrated have not caused the traffic problems which were expected. This is due primarily to the fact that at the time most theaters let out traffic on the highway is at a minimum. Problems of this type usually become critical only when they are coupled with heavy movements in nearby areas because of other activities which also generate large concentration of vehicles.

Left turn exit movements, like those of entrance, frequently cause operating difficulties. During egress the problem is aggravated by the long period of domination by theater drivers over highway drivers. Traffic control signals are employed by only 5 percent of the theaters to regulate the exit operation. Manual traffic control is used by 66 percent of the theaters. Sixty percent of the theaters use their own personel for this purpose. The difficulty in using theater employees as traffic officers is the tendency of such employees to favor the theater patrons. At one theater where left turns were prohibited and traffic at the exit was supposed to operate in a single lane, theater attendants were found enforcing these regulations as long as a state authority was present but did not do so without supervision. Unquestionably it is to the theater management's advantage to clear the theater as fast as possible. This often results in long unreasonable delays for highway users. Where left turns have been prohibited, this action frequently results in moving the left turn problem elsewhere along the same route and changes the movement from a simple left turn to a "U" turn.

So far it has not been possible to obtain sufficient information to measure the responsibility of drive-in theaters in the causation of traffic accidents. Due to the newness of the problem accident record bureaus have not segregated accidents occurring which involved theater operation. Experience has proven, however, that where speed differential is great and impatienc and irritability are rampant, traffic accidents are in the making.

Another factor which has caused considerable trouble on highways adjacent to drive-in theaters is the visibility of the motion picture screen. In some instances the screens have actually been built facing the highway. In other cases they have been visible from adjacent highways or at such angles as to be partially seen from the major route. These conditions result in drivers parki along the highway or slowing to intolerably low speed while operating through the area. Some traffic safety authorities have considered this tendency to slow down to be a healthy condition in the interest of accident reduction, but with driver's attention so diverted, such a theory is difficult to support. The advocation of pavement dips for slowing traffic stems from a similar philosophy.

The design of the entrance and exit facilities have in many cases contributed to the congestion and accident problem. Entrances and exits have sometimes been designed in a way that encourages multiple lane entrance movement from the highway. This can seriously impair the efficiency of the highway for handling through traffic. Frequently theater owners have indicated a desire for wide open access drives that could be used either for entrance or exit. Where provisions of this nature are made, large conflict areas are developed and the entrance and exit problems mentioned previously are still further complicated.

The design of the theaters themselves have added some to the problem facing traffic authorities. This has been due in some cases to insufficient storage area between the highway and ticket gates and holding area between the ticket gates and the stall area. Such deficiencies have resulted in vehicles storing on the highway either because the ticket takers could not operate fast enough or there was not room between the highway and gate or the space was all filled beyond the gate with vehicles waiting for the next show. Cases have been reported where attendants fail to advise highway traffic that all space is filled, thereby encouraging the continuance of highway congestion

Enforcement officials have not accepted as much responsibility as might be expected in directing traffic at drive-in theaters. Many have felt that such activity was outside their responsibility; others have found it impossibl to supply the needed manpower for a specific situation such as this in view of their overall problems.

In a few cases theater management has caused advertising and guide signs to be installed on highway right of way. Such signs being non-uniform frequently are a source of confusion to drivers. In some instances they have also been reported as constituting sight obstructions. Where neon lighting has been used, these lights often conflict with traffic control signals installed along the highway in the vicinity.

The foregoing remarks should not be construed to imply that all theaters are poorly located, poorly operated and poorly designed. This implication would be far from the truth. In fact no complaints were registered for many theaters reported, and many were given favorable mention as to their effect on traffic operation. Generally, theater management has been found most cooperative in complying with local regulations.

The factors underlying the difficulties created by drive-in theaters are quite specific and may be cited as follows: (1) the situation has developed over a relatively short period of time; (2) traffic authorities have shown considerable indifference to the problem in its early stages; (3) attempts have been made to regulate theaters with the same policies used for ordinary commercial entrances, and (4) adequate statutory and administrative authority to cope with the problem has not been established or exercised.

There are other enterprises which are very similar to outdoor drive-in theaters, such as baseball and football stadiums, midget auto race tracks and even large dance halls and night clubs. So far as the similarity exists the policies which are set forth in this report relating to drive-in theaters would be applicable to them as well.

Although many drive-in theaters have already been constructed, there undoubtedly will be many more. It is not too late to approach the problem realistically and factually. It is the purpose of this report to provide state authorities with the facts about the problem and outline a few of the proven techniqes for control, which should tend toward a uniform national policy for treatment of drive-in theaters.

CHAPTER II

LEGAL AND ADMINISTRATIVE ASPECTS

The difficulties created for motor vehicle travel by the drive-in theater are no different in kind though they are in degree, perhaps, from those generated by any other type of private enterprise that seeks to do business along our main highway corridors. The outdoor theater problem is really part of the more comprehensive so-called roadside problem.

It follows, therefore, that remedies and types of public regulation that have been used and proposed in connection with the control of the roadside generally are fully applicable in the case of the drive-in theater. What, then, are the several means that might be available to regulate a development that is imposing such unique traffic problems upon our streets and highways.

A number of alternatives are available: (1) By appropriate legislation, the construction of drive-in theaters can be prohibited entirely in designated areas. (2) Short of such prohibition, access to the highway to which they are adjacent may be controlled by denying direct access either wholly or partially. Or, while permitting their location along main highways, the design and traffic control features of the drive-in theater may be regulated in the public interest. (3) Finally, in liew of statutory control, consultation with the proposed owners of the theater facilities in the planning stages may be relied upon as the only safeguard against the establishment of another potential hazard along the roadsides.

Each one of these principal means of control can be explored in greater detail - -

Prohibition of outdoor theater construction. -- Probably the most effective remedy for the growing problem of the drive-in theater is the outright prohibition of this type of enterprise along State highways, including their trans-city connections. This might be accomplished either through the city or county zoning mechanism, or through strip or marginal zoning, sometimes identified as highway zoning.

With respect to location, the drive-in theater problem is both urban and suburban or rural in character. All but two States have zoning laws for all cities, while 43 States extend zoning authority to towns or villages as well. The two States limit zoning to special classes of cities.

At least twelve States have laws for zoning all counties in their respective jurisdictions, while at least ten limit zoning controls to specified counties only. 1/

Roadside zoning regulation, as specifically applicable to the drive-in theater, may be a part of county or rural zoning or even urban or suburban regulation. Or, if the regular zoning mechanism is not deemed to be an appropriate vehicle for the prohibition of the outdoor theater, it is conceivable that a simple statute or ordinance might be used, based upon the particular characteristics of the enterprise (and related undertakings as well) and the traffic hazards associated with its operation next to a heavily-traveled highway.

There is no doubt that such regulation would be effective. But from a practical point of view, it probably would be very difficult to

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1/ For a comprehensive and documented discussion of this matter, see PUBLIC CONTROL OF HIGHWAY ACCESS AND ROADSIDE DEVELOPMENT, Revised 1947, Public Roads Administration, p. 69 et seq.

obtain the public sanction for such controls on a widespread basis. Moreover, the courts have held, for example, that zoning regulations must be reasonable to be sustained under the police power. They must have a substantial relation to the health, safety, comfort, and convenience of the community, or they are untenable. The courts have said that when the exercise of the police power is so arbitrary and unreasonable that the interference is in substance a taking of private property rather than a mere regulation of its use, it can be justified only as an exercise of eminent domain and therefore must be accompanied by express or implied provision for just compensation.2/

It still remains an open question, then, whether the courts, when confronted with litigation on the matter, will rule that the prohibition of the outdoor theater through the zoning mechanism is invalid. It is altogether possible that when the facts are tendered to the judiciary -- the facts involving the hazards created by the drive-in theater, resulting diminution in traffic capacity, etc. -- that the final adjudication will be favorable to the public interest.

However, the present usefulness of the plan to prohibit outright the construction of outdoor theaters, may be somewhat limited.

Control of access, design and traffic. -- Short of outright prohibition of the enterprise itself, the regulation of access to such an establishment may be considered. This regulation might consist of the whole or partial control of the location of the outdoor theater facilities, and of the number and width and character of the points of access.

2/ Federal Eminent Domain Manual, Lands Division, Department of Justice, 1940, sec. 7, p. 23.

The outdoor theater will probably be prohibited entirely on expressways where access to the roadsides is absolutely prohibited Thirty States now authorize the establishment of controlled-access highways by statute, one additional State by judicial decision, and still another by constitutional provision and judical decision. But in toto, expressways will, even ultimately, account for only a small, though significant, percentage of our highway system.

On the remaining, and larger, mileage of main roads, where the outdoor theater is also a real menace, control of access to the outdoor theater will need to be achieved by other statutory means. There is little precedent for such public regulation. Presumably, it could be comprehensive in scope, applying to all enterprises that generate potential traffic hazards in the form of turning movements, the need for entry and exits, etc. This might mean that any substantial inductrial plant, a large office building, or other big traffic generator, might be regulated along with the outdoor theater. There is little precedent because of the rapid and spectacular development of the drive-in theater, and because, generally speaking, really effective legal measures for controlling undesirable roadside development have yet to be authorized.

Perhaps some new legislation is required to meet the apparent need for effective public control. While no attempt is here made to present a model law, a discussion of its more important elements probably would be helpful. To start with, the statute ought to be broad in scope, extending whatever regulation is deemed expedient to all types of private roadside enterprise that attract large segments of motor traffic. Legislation written specifically for the outdoor theater would probably

be labeled as class legislation by the judiciary and declared to be unconstitutional for that reason.

Secondly, the law should contain an adequate declaration of public policy, which presumably, would justify the type of control enacted. This policy could include a description of the potential hazards for the traveling public created by this type of roadside enterprise and the consequences of a lack of regulation thereof.

Authority to administer and enforce the regulation should be lodged by law in an appropriate State agency. Local regulation may be frail, unstable, and subject to local partisan pressures of all sorts not in the public interest. Moreover, uniformity of administration is essential for the program to survive attacks that will be made upon it by selfish interests. Additionally, difficulties are compounded when each of a relatively large number of local units need to be convinced of the merits of this type of roadside control, with the attendant furor of enacting appropriate local legislation. Finally, for the regulation to be effective, it must apply to both urban, suburban , and rural areas, in the cities and near the cities. State control seems indicated by these many considerations.

Broad discretion ought to be lodged in such an agency to prohibit or regulate access of such roadside establishments to the State highway system, their design, location, manner of access, width of openings, character of other facilities that might constitute hazards to motor travel, traffic control and regulation, and other matters arising out of the relationship of roadside enterprises to the highway to which they are adjunct.

This regulation of the roadsides, in the interest of safer and more efficient highway travel, is an expansion of the functions exercised in some States with respect to access connections of abutting property with State highways. Generally, a permit is required in such cases, before a new means of entrance or exit can be built into a main road. The granting of such a permit in most States is a ministerial act, and more often than not, close scrutiny of the plans with a view of their effect upon traffic, etc., is lacking.

It is conceivable that the strengthening of this basic form of control, providing a statutory basis for it where such is lacking, and transferring the administration to the division where the principles of traffic control are thoroughly understood, would go a long way toward attainment of the objectives sought.

Voluntary consultation. -- In the absence of statutory control, a few States have recently attempted voluntary consultation with proposed owners of outdoor theater facilities in the planning stages as a safeguard against the creation of additional hazards on the highway. Where such an expedient can be used, it certainly can help materially. Fundamentally, unless the expense to the private enterpriser will be considerable, prospective theater owners ought to welcome suggestions that will promote safety and efficiency of traffic movement in the areas proximate to their theater facilities. It is the realization that they will gain from an effort to diminish traffic hazards that have led some enterpreneurs to cooperate wholeheartedly with highway planners in such instances.

Yet, in such instances, voluntary expedients can never constitute an effective solution. It is virtually impossible to learn about proposed drive-in theater plans in advance, except by chance, unless an effective planning agency exists having jurisdiction in the matter. The hand of the State highway department must be strengthened. Its authority must have some statutory origin for its efforts, cooperative or otherwise, to be fruitful.

CHAPTER III

LOCATION, DESIGN, AND OPERATION STANDARDS

The context of this chapter deals, primarily, with the location of theaters, and the design of their access and storage facilities as they affect the operating efficiency of both the theaters and the adjacent highways.

By adopting proven standards and applying them where they fulfill a warrant, a plan can be developed, or an adjustment made, which will be invaluable in dealing with the problems arising from drive-in theaters

The location of drive-in theaters in relation to the highway is of vital importance. Mr. George M. Peterson, a notable designer of drive-in theaters, states in the "BETTER THEATERS" section of the MOTION PICTURE HERALD, in the February 14, 1948 issue, "Many would-be drive-in exhibitors are of the opinion that the super-highways are the best locations for their theatres. Years of experience in observing the operation of drive-in theatres under all kinds of conditions, leads the writer to favor the theatre located on a good paved side road, just off of the super-highway, so that the outgoing traffic from the theatre, will be able to ease on to the super-high, instead of crashing into it directly from the theatre." Mr. Petersen's concul certainly is sound and if heeded would have reduced considerably some of the traffic problems which have been caused by contrary situations.

Theaters should never be constructed at isolated locations on high speed highways. Such action develops new areas of congestion and potential accident prone locations. One theater reported was built three miles from a fairly large city on a two lane transcontinental highway where no other commercial establishments existed. Vehicle speed on this section of highway had an average of 53 miles per hour and an 85 percentile of 61 miles per hour. During periods of entry traffic was backed up for over one-half mile because of the inability of drivers to turn left across the apposing traffic lane. The situation caused the intermingling of high speed transcontinental traffic and low speed joy riders. Such contrasts present intolerable traffic conditions which lead to traffic accidents. Another theater was reported constructed on a four lane highway carrying the largest traffic volume and having the highest accident rate in the state. The site upon which this theater was built was too small and did not permit the provision of sufficient storage between the ticket gates and highway. Some legal authority should be available to cope with cases such as these where cooperative arbitration fails.

A few cases have been sited where through cooperative effort between state officials and theater owners desirable locations have been found to the satisfaction of all concerned. The success encountered through this arrangement substantiates the fact that administrative authority is often only as val as the ability of the administrator to obtain acceptance of his authority. Most theater owners want to do that which is in the best interest of the public good. Most state administrators want to be reasonable in their demand on theater owners in the interest of public safety. Little difficulty should exist with both interests working from these standpoints.

In the same article referred to above, Mr. Peterson sets forth a number of factors which should be considered in the selection of a theater site. He recommends a property width along the highway of 100 feet for each 100 car capacity; ramps spaced 38 feet on centers and speaker posts 17 feet on centers. He supplied the following table as a measure of the depth of theater necessary:

Capacity	No. of Ramps	Distance from Screen to Rear of Last Drive
500 cars	10	510 feet
586 cars	11	548 feet
670 cars	12	586 feet
778 cars	13	624 feet
886 cars	14	662 feet
1000 cars	15	700 feet

To this depth must be added the distance from the screen to the highway Mr. Peterson recommends a minimum distance of 100 feet.

Although the state administrator is not directly concerned with some of the factors quoted above, yet unless there is sufficient space available to accommodate the proposed capacity of the theater, difficulties will be encountered at the entrance.

Theater screens should never be permitted to face the major highway. It would be next to impossible to require that the screen be invisible to all side roads in the area, but certainly it should be turned so as to affect the least traffic operation. In a few cases an attempt has been made to obstruct the vision of the screen by a high fence. Although some success has been reported by this action, generally it is a poor substitute for setting the screen properly in the first place. Furthermore such fences constructed at the heights necessary are extremely costly to theater owners. Since drive-in theaters are a permanent thing, it would be reasonable to consider the use of trees as a means to obstruct the vision of screens where it is necessary for

such to face the highway. In moist soils the willow or poplar trees would provide excellent screening in two or three years if planted at eight to ten feet in height, depending of course upon the grades involved and the height of the motion picture screen. The eucalyptus tree could be used in areas where frost or freezing does not occur. Where this proceedure is contemplated, the local nurseries in the area involved should be consulted to obtain the most suitable type of trees.

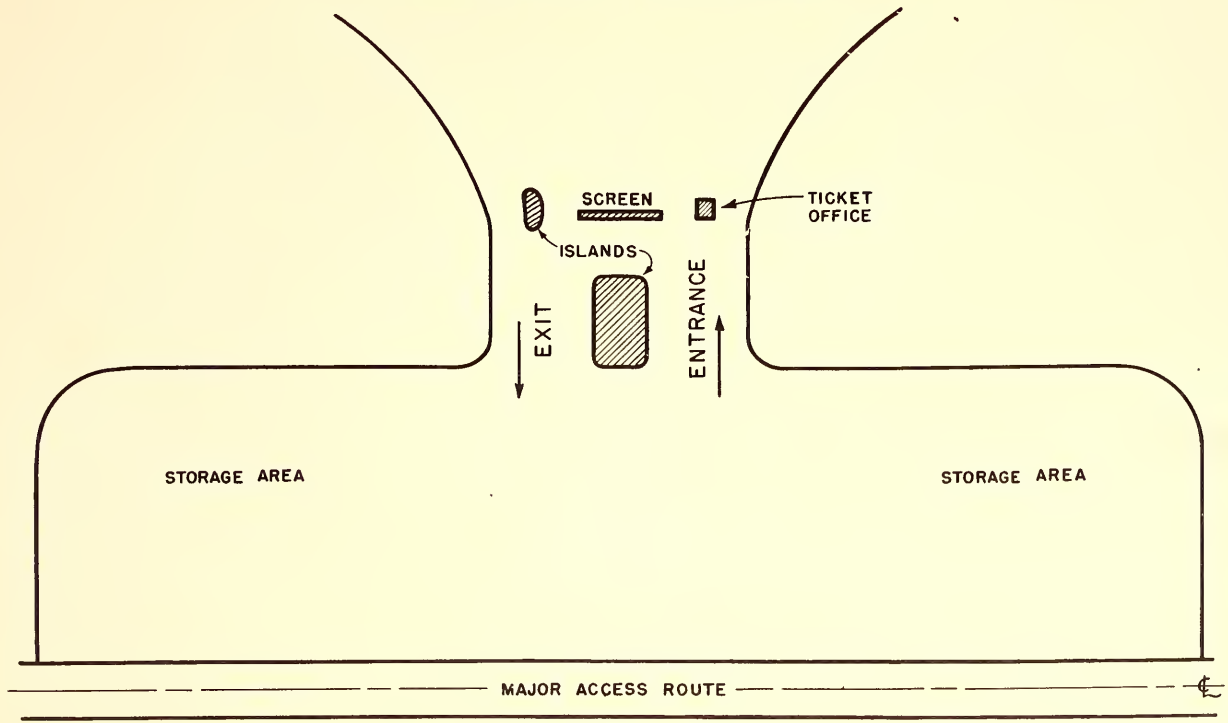
The following plans show the typical designs of theater entrances generally used. The "wide open" type is characteristic of the earlier theaters and those now being built by small operators in unregulated areas. This type of entrance develops large areas of conflict and contributes materially to congestion. This type of entrance when located on major highways makes it possible for theater patrons to virtually take over the highway during periods of exit. Sometimes this entrance is improved slightly by the introduction of two islands leaving three openings. This still permits one opening too many for best operation.

The "narrow type divided" is one of the most common entrances used. In a few cases the medial island has been omitted. The island is necessary to insure the most orderly movement.

The type showing "separate entrance and exit lanes (symmetrical)" is also very common and very desirable from the standpoint of handling traffic. In this plan the entrance and exit lanes are completely separated and clearly defined. The separation permits left turn movements simultaneously into and out of the theater without too much confusion. In a plan of this kind the ticket office can be adjusted nearer or farther away as required for storage between the ticket gate and highway.

The entrance showing a "special entry storage" lane is one of many

TYPICAL PLAN OF ACCESS
DRIVE-IN THEATER



WIDE OPEN TYPE

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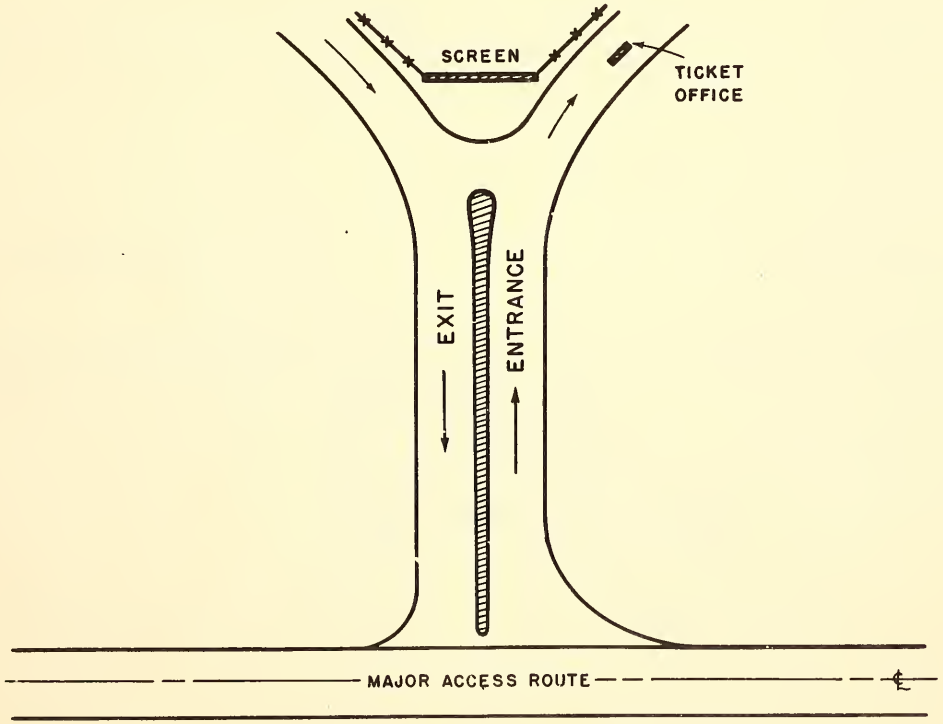
Sub-committee on Roodside Control

TYPICAL PLAN OF ACCESS
DRIVE-IN THEATER



NARROW TYPE (DIVIDED)

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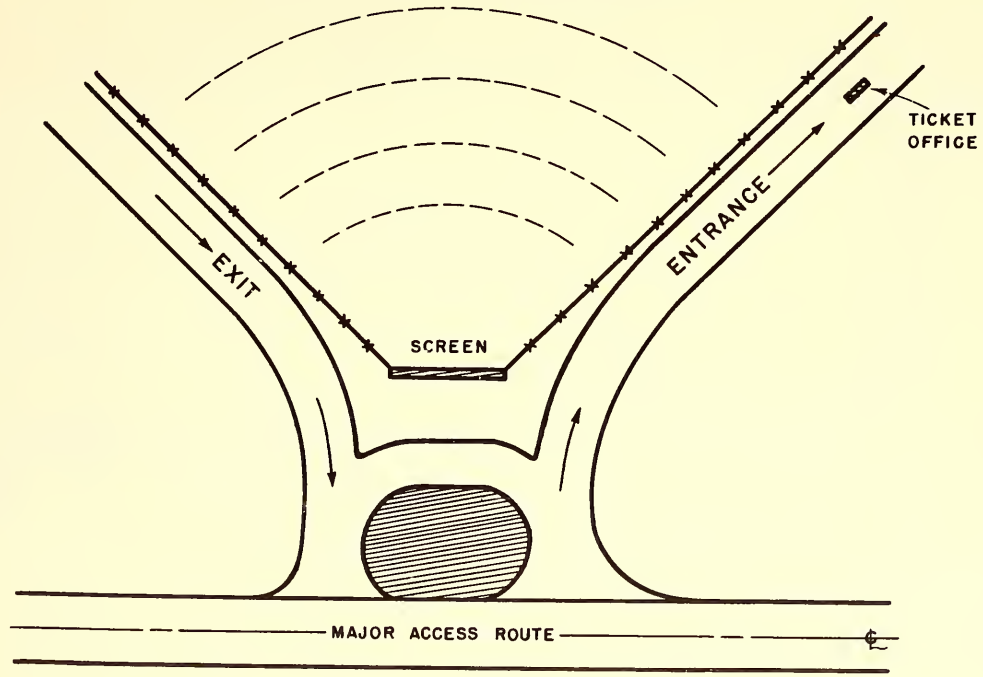
TYPICAL PLAN OF ACCESS
DRIVE-IN THEATER



SEPARATE ENTRANCE AND EXIT LANE
(SYMMETRICAL)

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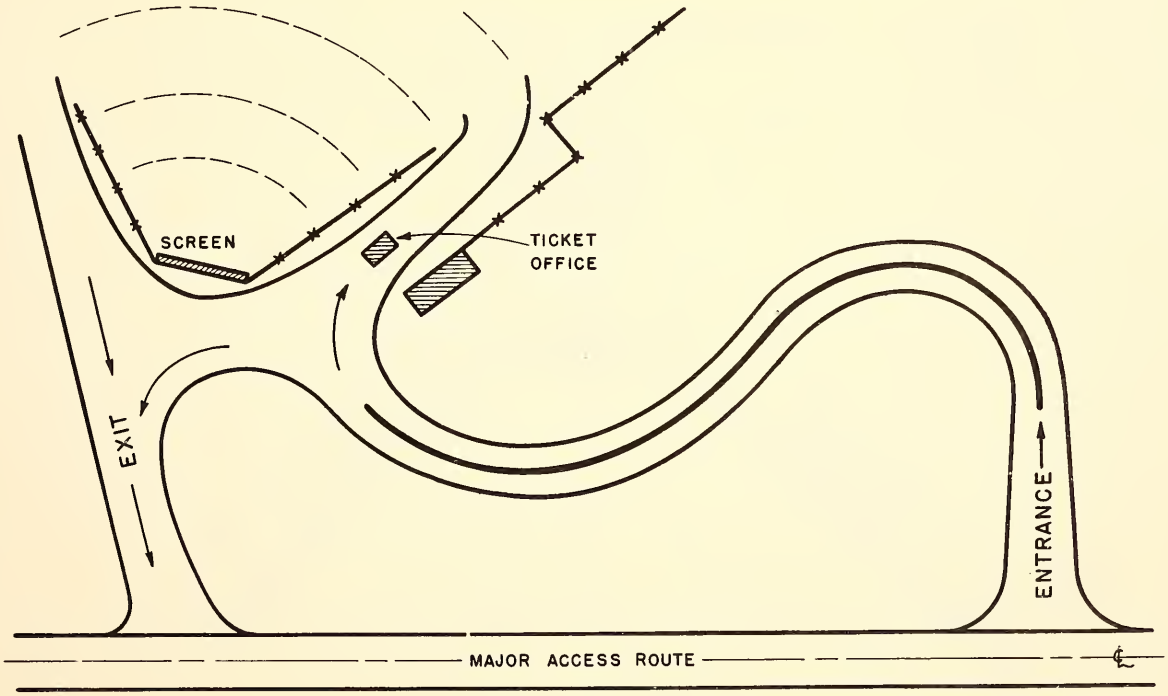
TYPICAL PLAN OF ACCESS
DRIVE-IN THEATER



SPECIAL ENTRY STORAGE

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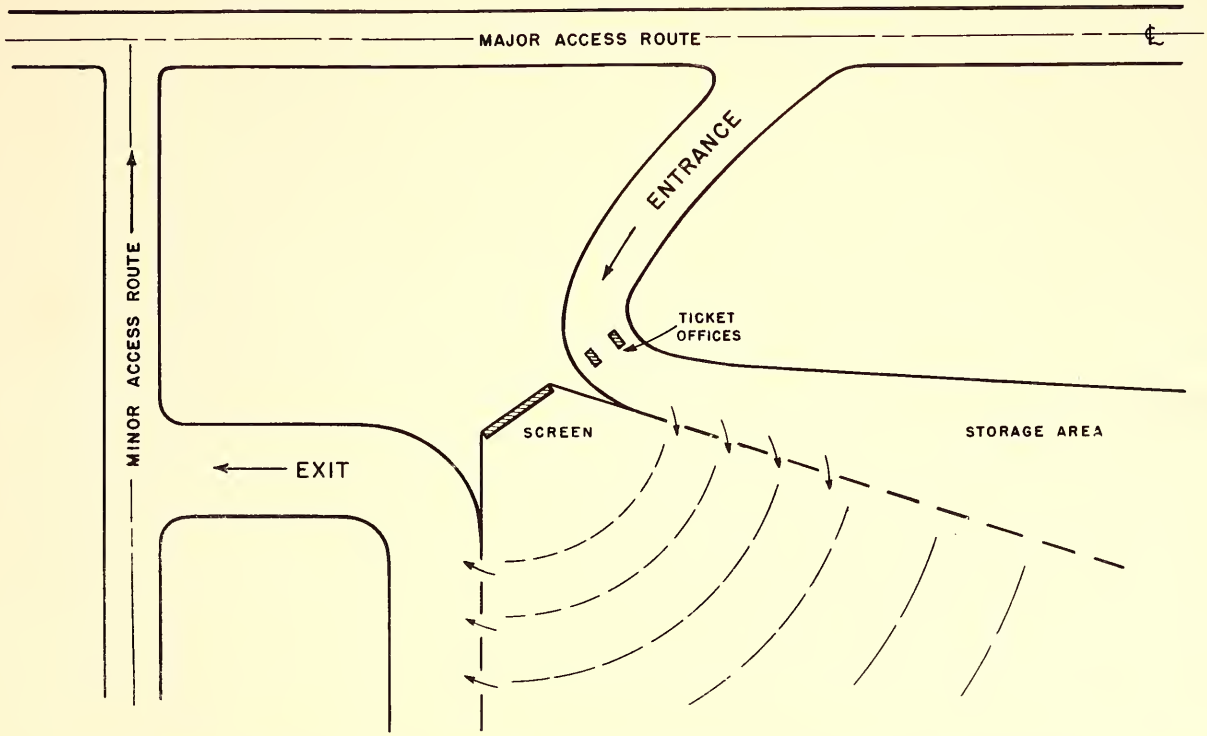
TYPICAL PLAN OF ACCESS
DRIVE-IN THEATER



MULTIPLE ACCESS, ENTRY AND EXIT ON SEPARATE ROUTE

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variations used where additional area is necessary. Sometimes in addition t the rather devious entrance route an additional holding area is introduced midway. Generally, however, unless space behind the screen is extremely limited the provision of large holding areas outside the gates should not be necessary.

The "multiple access, entry and exit on separate route" plan is highly desirable, especially where the minor access route intersects the major route some distance from the entrance. Anything that can be done to disperse the traffic and encourage the use of alternate routes relieves congestion.

The "multiple access route" plan is just a variation of the one above. This plan includes two exits on the major route which is not recommended. The use of two entrances with one on the major and one on the minor route is excellent.

The proper design of any highway intersection or entrance includes provision to permit egress as fast as possible and ingress only as fast as the highway facility can absorb the traffic. In the design standards recommended in this report a 20 mile per hour right turn movement has been used. A higher right turn speed than 20 miles per hour would be desirable but in studies made of voluntary unrestricted right turn movements of vehicles leaving a major highway onto a driveway, few speeds in excess of 20 miles per hour were noted. There would be little purpose in providing for operating speeds which would not be used. A radius of 50 feet will provide a right turn speed of 20 miles per hour and has been used consistently throughout this report. Inasmuch as left turns entail the crossing of opposing traffic streams, this movement should be restricted to as slow a speed and as sharp a turn as possible.

The design of drive-in theater entrances or other similar enterprises varies from the entrance design of ordinary filling stations, eating places,

etcetera, only in the rates of arrival and leaving. These two factors, however, make it essential that definite separate entrance and exit lanes be provided and that they should not be used interchangeably.

Not more than one entrance should be permitted for each access road. On two lane highways the width or number of lanes permitted is of little consequence. There is little probability that theater patrons would monopolize both available lanes. In other words, regardless of how wide the entrance is, only one lane of traffic entering would develop for each direction of travel. Just to keep the width within reason, however, a maximum of 40 feet is recommended where left turns are permitted. If left turns are not permitted, a maximum width of 30 feet is recommended.

On three or more lane highways, not more than one lane of entrance per direction of travel should be permitted. This discourages the use of more than one lane per direction of travel by theater patrons. Where left turns are prohibited, this single lane should be no more than 14 feet in width. If left turns are permitted, the two lanes should not be more than 19 feet in width. At one theater where a 17 foot width was permitted for what was supposed to be single lane operation, two lanes used the opening quite easily.

When a similar number of theater patrons originate from opposite directions, it is quite desirable to provide two entry lanes, one designed to accommodate the flow for each direction. In the typical plan showing this arrangement, the difference in the turn angle should be noted. For the right turn movement the driveway is constructed on a 45 degree angle to the highway, but for the left turn movement the driveway is laid out at an angle of 90 degrees to the roadway. The two entrances could be located as much as several hundred feet apart.

No more than one exit should be permitted for each access highway, and

no more than one lane should be permitted for each direction of travel. Where left turns are prohibited the exit should not be more than 14 feet in width and where left turns are permitted, it should not be more than 19 feet in width. Where left turns are permitted, a small island in the throat of the exit is desireable to insure that vehicles entering the left side of the exit go left and not double up to the right.

Acceleration and deceleration lanes are highly desirable where the design speed of the major access road is forty miles per hour or over. The following charts and plans have been copied and adopted from A POLICY ON INTERSECTIONS AT GRADE, published by the A. A. S. H. O. For further details refer to that publication, pages 42 through 50.

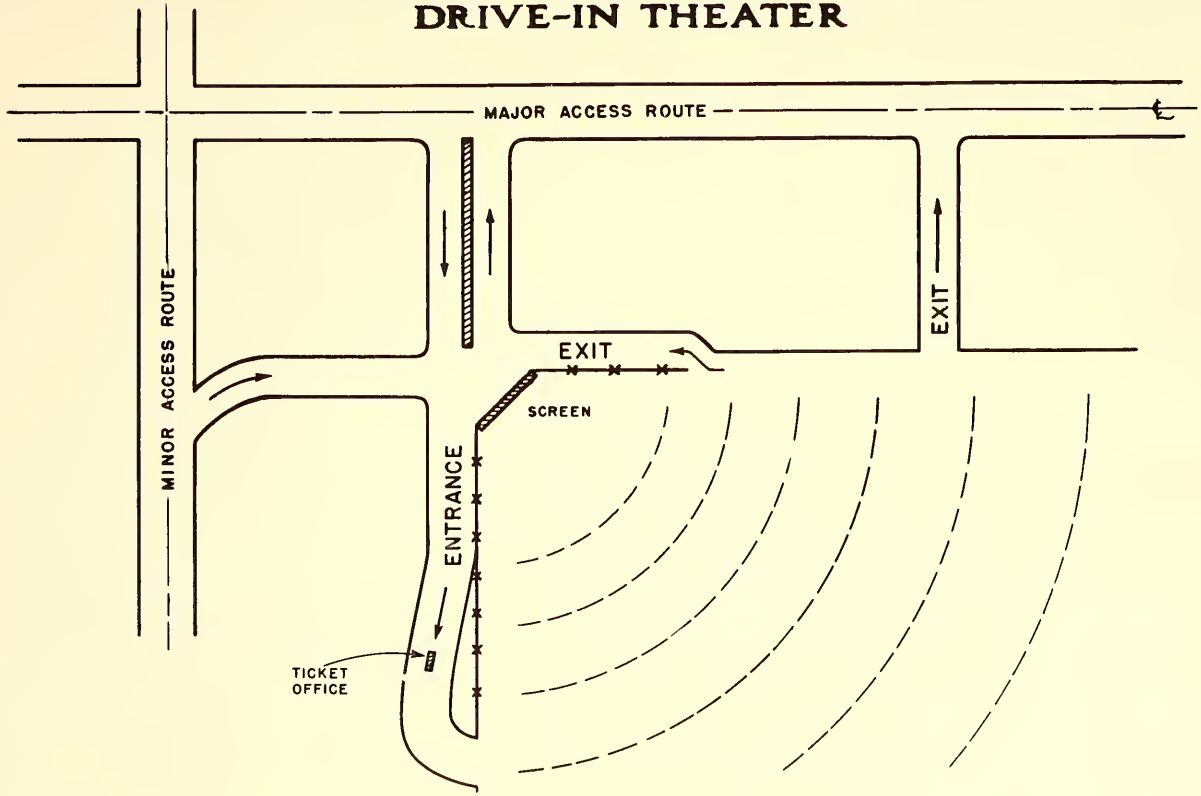
Where left turns are permitted, medial islands are highly desirable on the major route. Such islands should be wide enough to permit shadowing and provided with special left turn acceleration and deceleration lanes. For a complete discussion of the design policies involved you are referred to A POLICY ON HIGHWAY TYPES also published by the A. A. S. H. O.

A plan showing the Typical Application of Entrance and Exit Design Recommendations is included. This plan shows the application of left turn restrictions.

A plan is also included which shows a twin screen. This plan of a theater which was actually constructed in Wisconsin, is an excellent example of a good layout and includes most of the recommendations included in this report.

The matter of traffic control on the highway is a matter of much

TYPICAL PLAN OF ACCESS
DRIVE-IN THEATER



MULTIPLE ACCESS ROUTE

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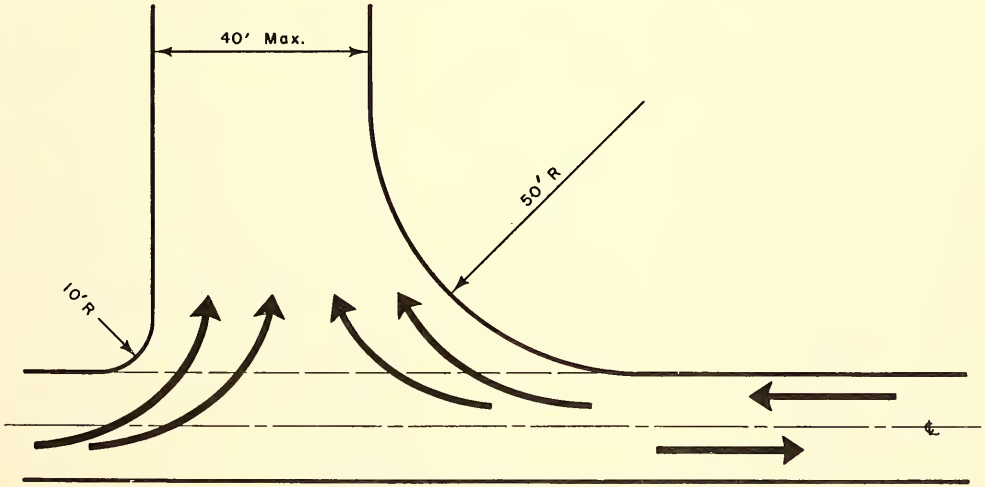
Sub-committee on Roadside Control

ENTRANCE PLAN
TWO LANE ACCESS ROAD



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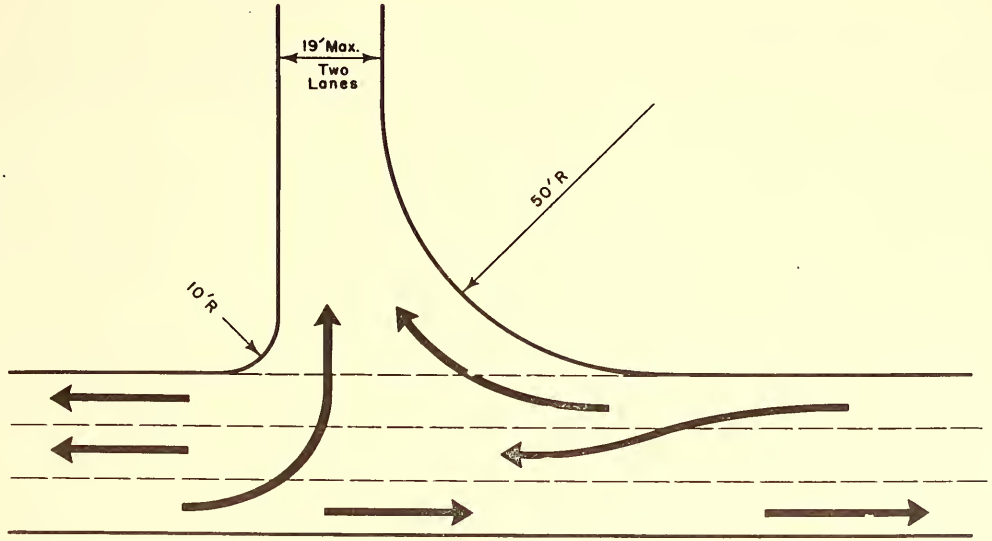
ENTRANCE PLAN

THREE OR MORE LANE ACCESS ROAD

LEFT TURN PERMITTED



A.A.S.H.O. Committee on Traffic

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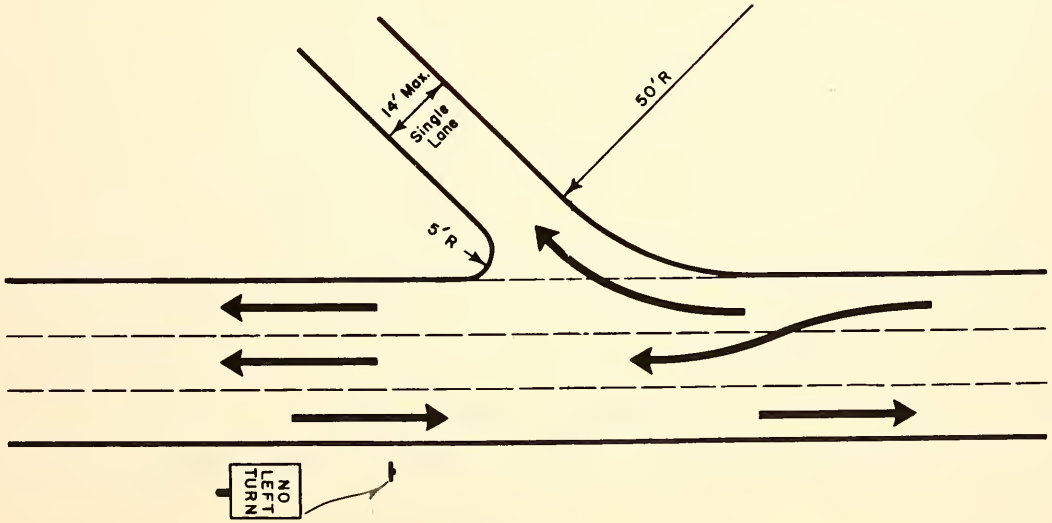
ENTRANCE PLAN

THREE OR MORE LANE ACCESS ROAD

LEFT TURN PROHIBITED



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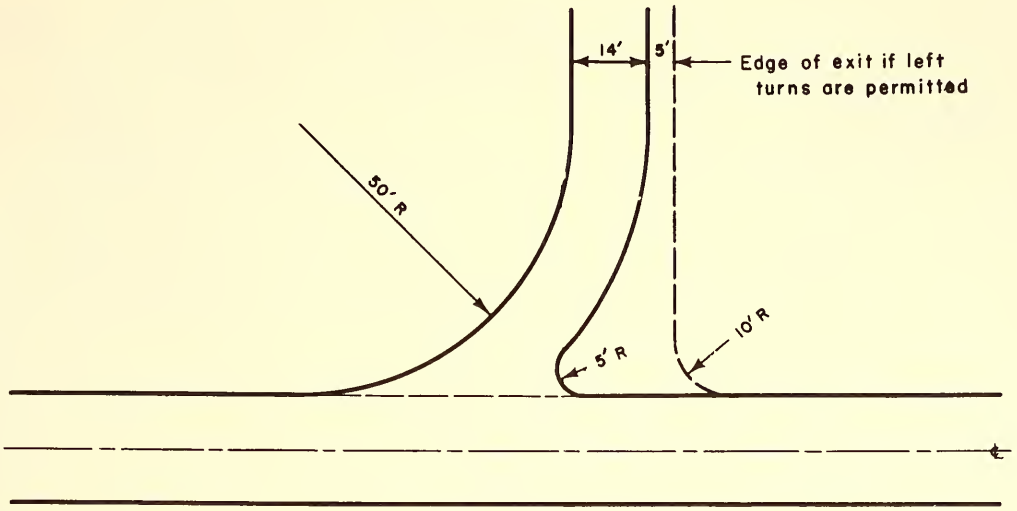
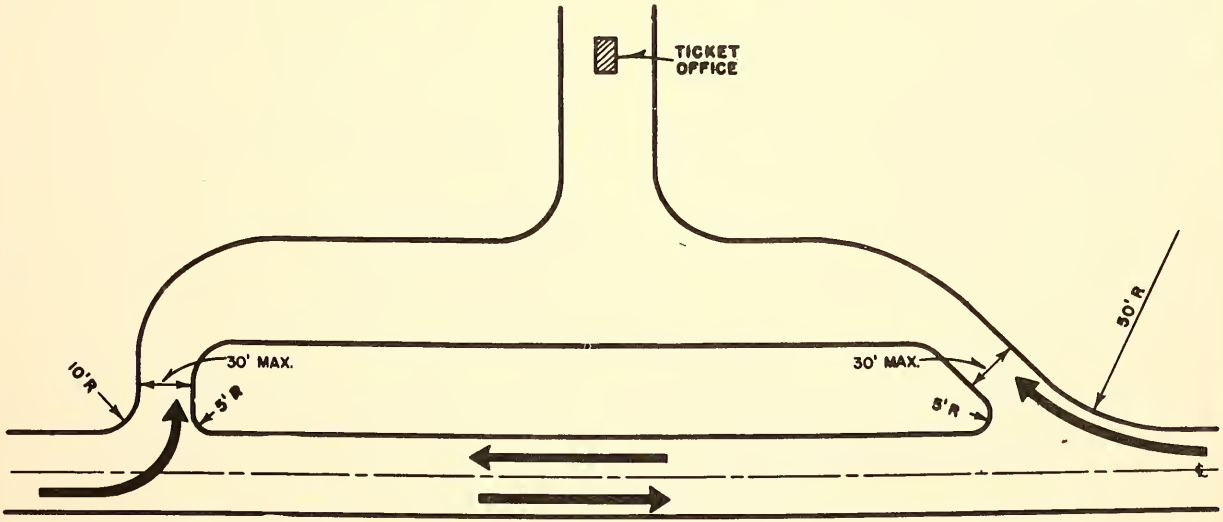
EXIT PLAN



ENTRANCE PLAN

TWO LANE ACCESS ROAD
SIMILAR VOLUME EACH DIRECTION



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controversy. Traffic signals have been used at only 2½ per cent of the theater locations. Most of these have been installed on four lane individed highways at theaters having a capacity of 800 vehicles or more. Both fixed time control signals and actuated signals have been used. In several states only actuated signals are permitted, and these are paid for by the theater owner but installed and operated by the state.

The use of traffic signals for drive-in theaters is somewhat questionable. The peak periods of arrival and leaving are relatively very short. This peak period at entrances exists from 20 to 60 minutes, although at most theaters where second showings are possible, vehicles are coming in over a two to three hour range. At exits the peak extends over a period of from 10 to 30 minutes and occurs as often as there are showings. Traffic signals would normally be impractical for entrance control unless a special left turn provision was made on the highway. Signals would serve a purpose at exits where left turns are permitted. Where left turns are not permitted and acceleration lanes are provided, signals would be generally unnecessary. In view of the short periods required, the limitation of service provided and the costs of installation and maintenance of traffic signals, the use of manual control would be more adaptable to situations of this kind.

The Manual on UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, published by the Bureau of Public Roads includes warrants for fixed-time traffic signals for locations similar to drive-in theaters under the section on "Interruption of Continuous Traffic," as follows:

> "In Rural Areas:
>
> 1. Vehicular volume on the major thoroughfare past an establishment of the type mentioned above exceeds 400 cars per hour at the approximate time of major movement of traffic to and from the establishment, and traffic to or from the establishment roadway during the same period of time meets one of the

following warrants:

(a) A minimum of 150 cars per hour, or
(b) A minimum of 100 pedestrians crossing per hour, or
(c) A minimum of 100 cars and 50 pedestrians crossing per hour.

2. Left turns into or from the establishment roadway exceed 30 percent of the 400 cars per hour past the establishment.

3. Four lanes of traffic moving past the establishment exceed an average speed of 40 miles per hour during major movement of traffic.

4. A sharp vertical or horizontal curve or view obstruction exists near the entrance or exit of the establishment, one or a combination of which creates a serious accident hazard."

In addition to the above it is also possible that a fixed-time traffic control signal could be warranted due to sufficient accidents occurring susceptable to correction by traffic signals as set forth in Section 212 of the same publication.

The Manual also includes a discussion of warrants for traffic-actuated control signals. This type of control would be recommended where traffic volumes and other factors were somewhat below that listed above, although they could be used instead of fixed-time control units where such warrants are fulfilled. If some form of traffic signal was considered requisite and the cost of an actuated control unit could be justified, this form of control would be much preferable to fixed-time control due to its greater flexibility and efficiency.

Flashing beacons have been used to some extent at the entrances and exits of theaters. The use of flashing beacons can be justified where the location is obstructed from view because of a hillcrest, curve or other obstruction. Generally, however, if sight is unlimited there is sufficient evidence of the theater because of it's own lighting that such flashing beacon has little significance. Some theaters have used a flashing beacon

in conjunction with a warning sign installed on the shoulder of the roadway 1,000 feet ahead of the entrance. Such flasher is turned on only when the theater is in operation.

The use of advance warning signs is also questionable when the theater is clearly visible for the same reasons pointed out in regard to flashing beacons.

Traffic control at the entrances and exits is best handled by a uniformed officer. This officer can either be a deputized theater employee, local police officer, county sheriff or member of the state police. Only 27 per cent of the theaters have the services of regular enforcement officers for traffic control. Thirty-seven per cent are presently using their own employees. The records do not indicate how many of the 37 per cent are deputized. Thirty-three per cent of the theaters have no form of traffic control whatever, and the majority of these are theaters having capacities between 300 and 700 vehicles. There has been some controversy as to the relative merits of using deputized theater employees. Most reports indicate that such an arrangement is quite satisfactory. Other reports indicate that there is too great a tendency for theater employees to favor the theater patrons unduly over through highway traffic. In many areas the local, county or state enforcement agents are not capable of supplying manpower for these activities due to a shortage of help and general demands. Some enforcement agents feel that they should not be concerned with the drive-in theater problem due to its private commercial nature. As long as drive-in theaters have the support of the public, problems arising from their presence are public

problems and not private, and should therefore have the advantages of those services provided for public safety and welfare. Although regular trained enforcement officers would be desirable, yet if they are not available, a deputized trained theater employ should be able to handle the problem successfully.

Left turns on high speed access highways should be restricted at entrances and exits wherever such restriction does not develop a more critical problem elsewhere. This should be done even though it requires some additional travel on the part of theater patrons. Most patrons do not mind the additional mileage because they are "out for the ride" anyway. Sometimes this left turn restriction creates a tendency for "U" turns at other locations along the highway. This practice would be undesirable and makes it necessary to decide whether or not the problem created by the few making "U" turns is greater than the problem caused by the many making left turns.

Where theaters are located on divided highways there is always a question as to the warrants for cutting the medial divider to permit left turns. Such action definitely destroys one of the main purposes of such divider. When the opening is provided for one activity it should be provided for all activities. Such a policy if carried to extremes would soon remove the medial island entirely. Certainly the effect of cutting any exiting islands should be considered carefully along with the overall effect of left turn prohibition

Care should be taken to keep all purely advertising signs off state highway right of way. Signs of a directional or warning nature regarding the theater actually necessary on highway right of way should be designed and located by the state but probably should be paid for by the management.

LENGTHS OF DECELERATION LANES*

FOR TURNING SPEED OF 20 M.P.H.

Assumed design speed of highway (V)	30	40	50	60	70
Speed at beginning of deceleration (0.7 V), m.p.h.	21	28	35	42	49
Deceleration before braking:					
Time, seconds (assumed)	..	3.0	3.0	3.0	3.0
Speed reached (figure 19-A), m.p.h.	..	25.0	31.5	37.5	44.0
Distance (figure 19-A), feet	..	100	140	170	200
Deceleration while braking:					
Average friction factor (assumed)	..	0.20	0.23	0.27	0.30
Corresponding rate, m.p.h.p.s.	..	4.4	5.1	5.9	6.6
Time, seconds	..	1.1	2.2	3.0	3.6
Distance, feet	..	40	85	125	170
Total time, seconds	..	4.1	5.2	6.0	6.6
Total distance, feet	..	140	225	295	370
Rounded distance, feet	0	140	220	300	380

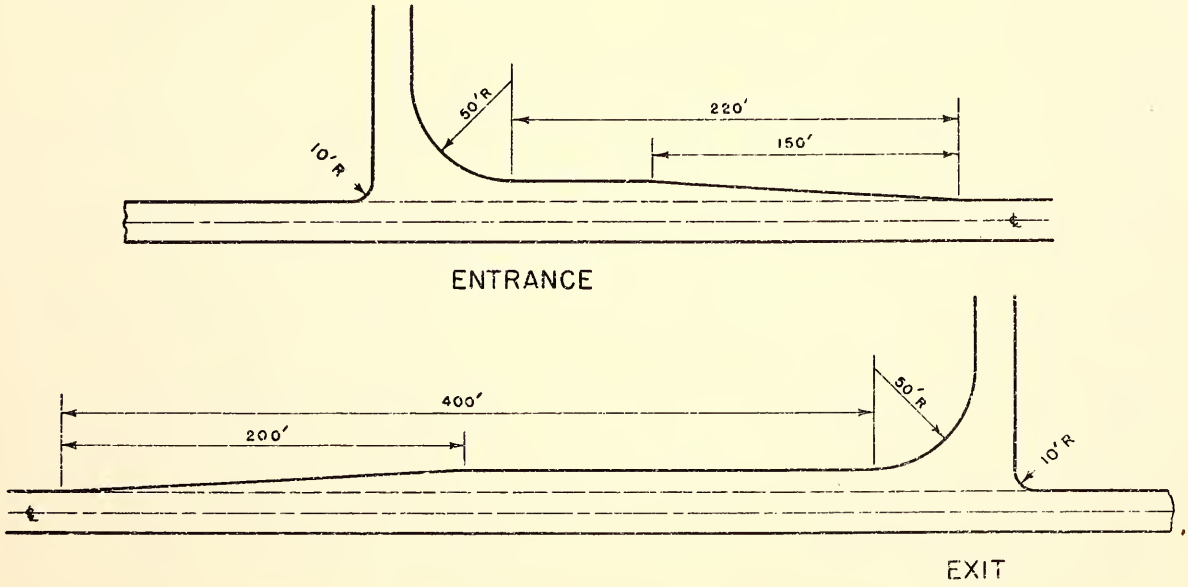
LENGTHS OF ACCELERATION LANES*

FOR TURNING SPEED OF 20 M.P.H.

Assumed design speed of highway (V), m.p.h.	30	40	50	60	70
Speed reached (0.7 V), m.p.h.	21	28	35	42	49
Time to accelerate, seconds	..	5.1	10.2	16.0	22.8
Acceleration distance (figure 19-B), feet	..	180	410	750	1,180
Rounded length of acceleration lane, feet	0	180	400	750	1,200

*A.A.S.H.O. "A Policy on Intersections at Grade", 1940

ACCELERATION AND DECELERATION LANES FOR DRIVE-IN THEATER



50 MILE PER HOUR HIGHWAY

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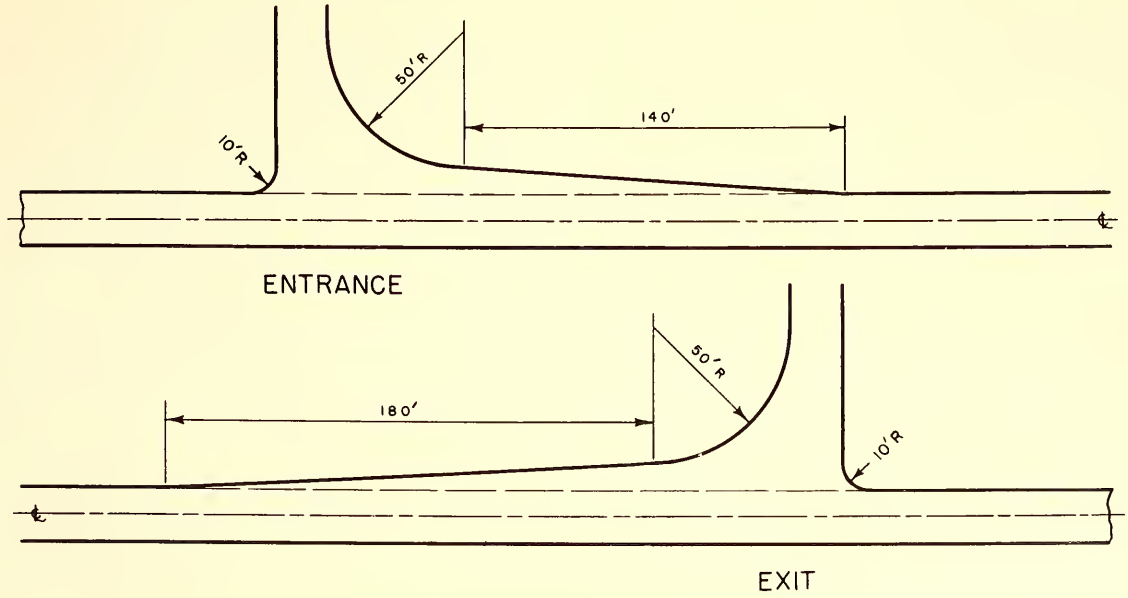
Sub-committee on Roadside Control

ACCELERATION AND DECELERATION LANES FOR DRIVE-IN THEATER



40 MILE PER HOUR HIGHWAY

A. A. S. H. O. Policy on Intersections

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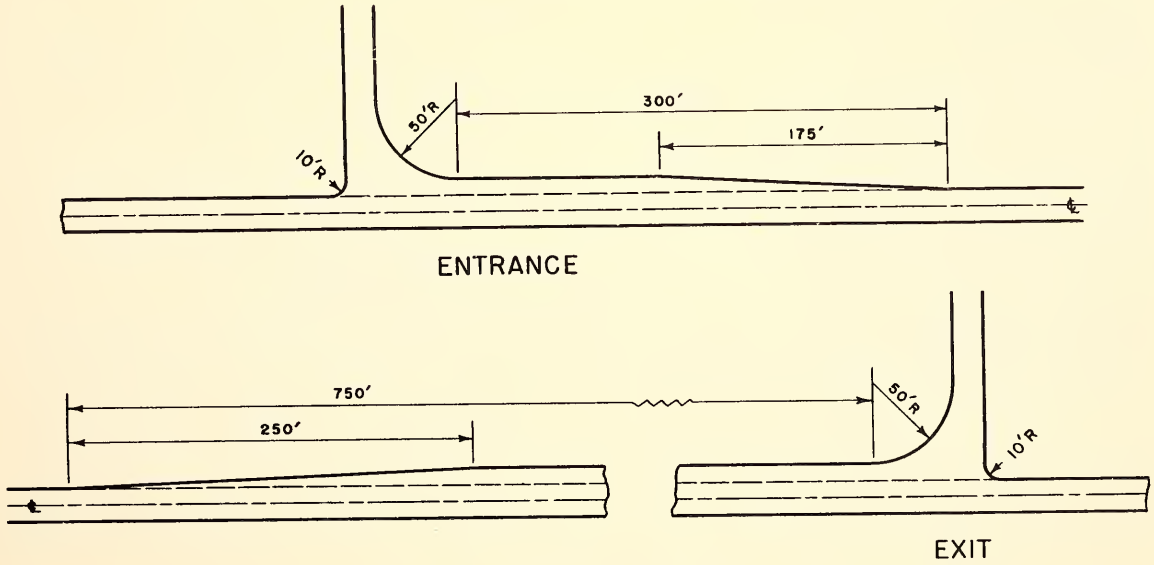
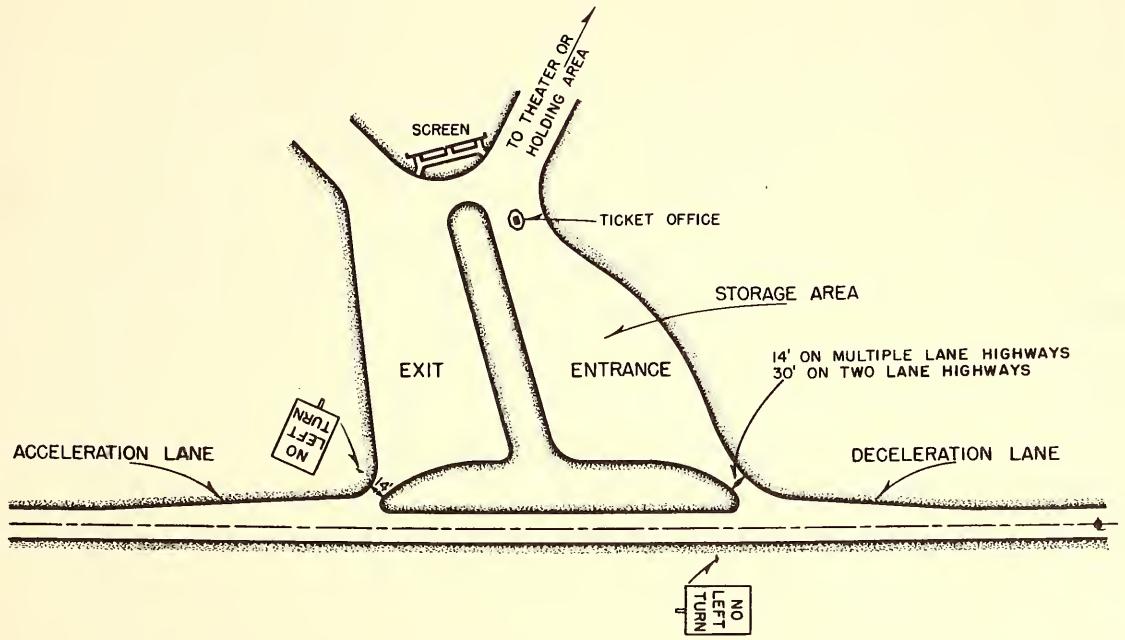
ACCELERATION AND DECELERATION LANES FOR DRIVE-IN THEATER



60 MILE PER HOUR HIGHWAY

TYPICAL APPLICATION OF ENTRANCE AND EXIT DESIGN RECOMMENDATIONS FOR DRIVE-IN THEATERS



A. A.S.H.O. Committee on Traffic

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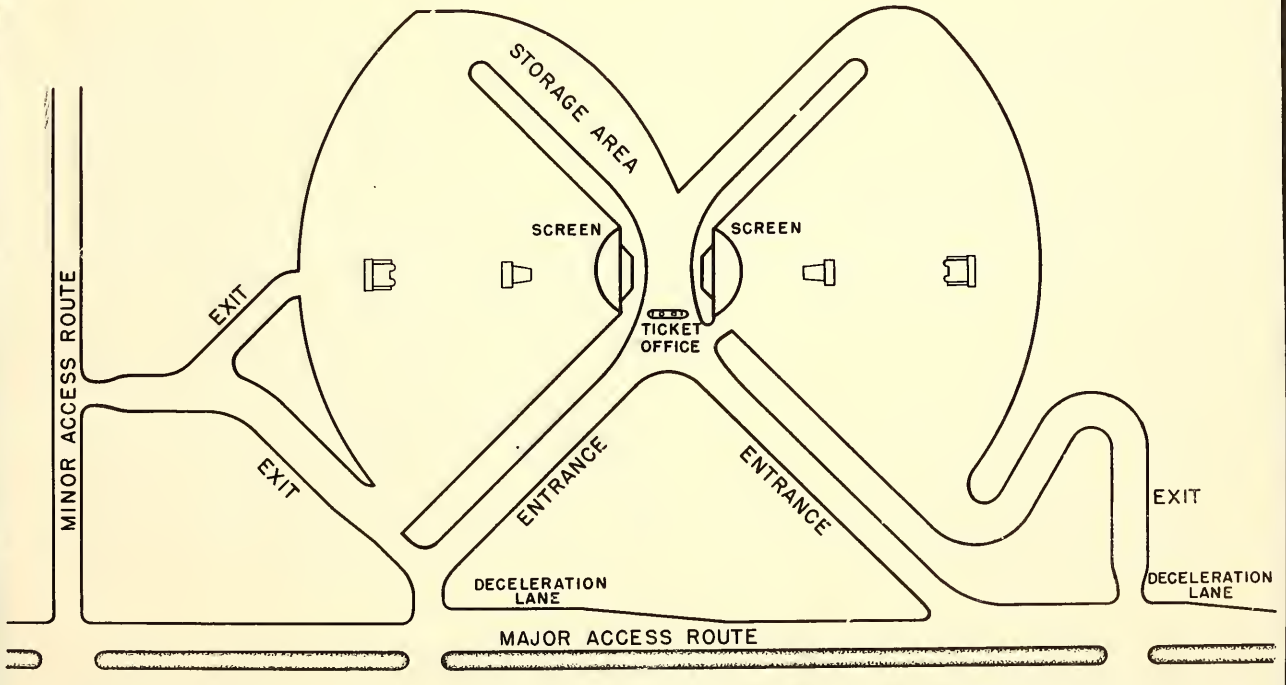
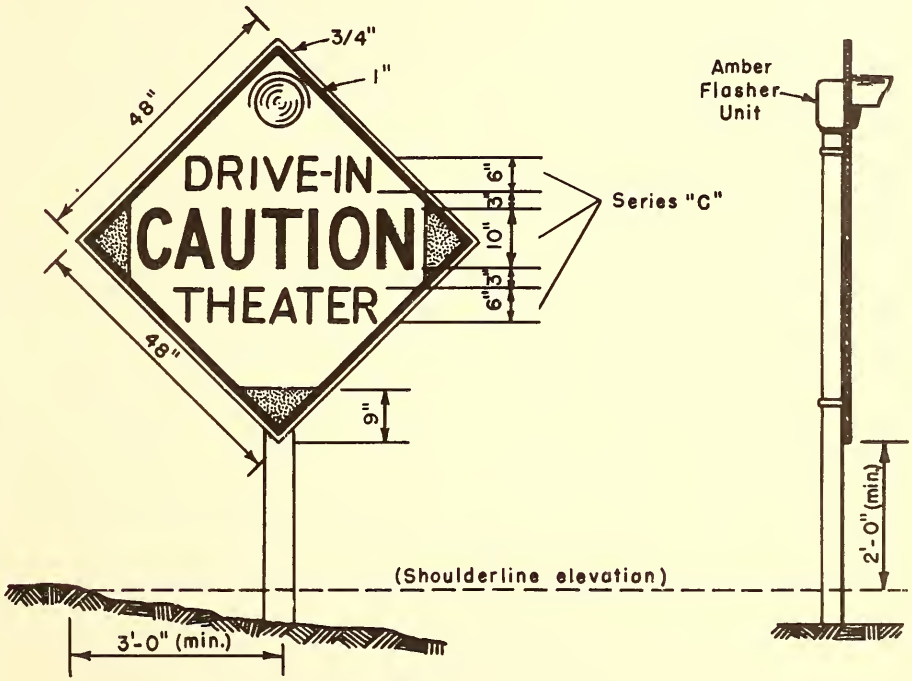
LAYOUT OF TWIN SCREEN DRIVE-IN THEATER



A.A.S.H.O. Policy on Intersections

Sub-committee on Roadside Control

SUGGESTED STANDARD WARNING SIGNAL FOR DRIVE-IN THEATERS



Background: Yellow
Letters and Border: Black
Corners: Red

Use beaded reflectorized material on background and corners.

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The erection of "No Parking" signs, along the shoulders of highways adjacent to theaters, has generally been found necessary.

Highway lighting is recommended. Either a sodium-vapor or mercury vapor light source could be used. It is probable that due to its monochromatic yellow color, sodium-vapor would not be acceptable to most theater owners. It has been argued by some owners that the floodlighting used to illuminate theater advertisements and plazas throws sufficient light on the highway to serve the purpose. However, such light is ordinarily poorly arranged and directed so that actually it does more harm than good. It blinds drivers on the highway and throws eerie shadows over the roadway causing blind spots and confusion. The amount of illumination, type of light source, height and spacing of luminaires is dependent upon the traffic volumes, highway width and general character of the surroundings. The subject of highway lighting is treated throughly in the TRAFFIC ENGINEERING HANDBOOK, pp. 226 to 249, published jointly by the Institute of Traffic Engineers and National Conservation Bureau.

Speed signs should only be used when there are factors other than those involving the drive-in theater. Speed signs have a very limited value in changing materially the operating characteristics on any section of highway. Drivers regulate their speed more by what they see and in accordance with their own conception of safety than by what they are told to do by regulation. Inasmuch as most drive-in theaters are located on high speed highways and the speed differential is great between normal operation and theater operation, speed signs would accomplish little purpose. Furthermore, a limit established to conform to theater operation would be ordinarily unreasonable during other periods of the day and the changing of limits to conform with these variations would be impractical.

CHAPTER IV

VEHICLE STORAGE

The subject of vehicle storage at drive-in theaters is a matter of great concern to both theater owners and officials interested in the safe and convenient operation of the public highways. Though, perhaps less vital, but still significant, is the concern of theater patrons and motorists using the highway adjacent to the theater.

Categorically, the concern of each of these parties is somewhat different Admittedly, most, perhaps all, drive-in theater owners are interested in the operation of roadways adjacent to their property, but it is very reasonable to assume that their primary interest is in accommodating their patrons. In the vast majority of cases more than one show is presented nightly in which case theater operators have provided space to care for early arrivals for the second show. This is the type of storage which concerns theater owners. Those who have made provisions have done so in one of two places, either in front of the ticket gates or in back of them, seldom in both places. Of course many times, adequate storage in either place has been sacrificed because the site did not permit it, or the cost of land was the prohibitive factor. This is not to be interpreted, that the interest of theater owners is of a selfish nature. On the contrary, numerous theaters have rather elaborate and unique provisions to remove patrons from highway traffic.

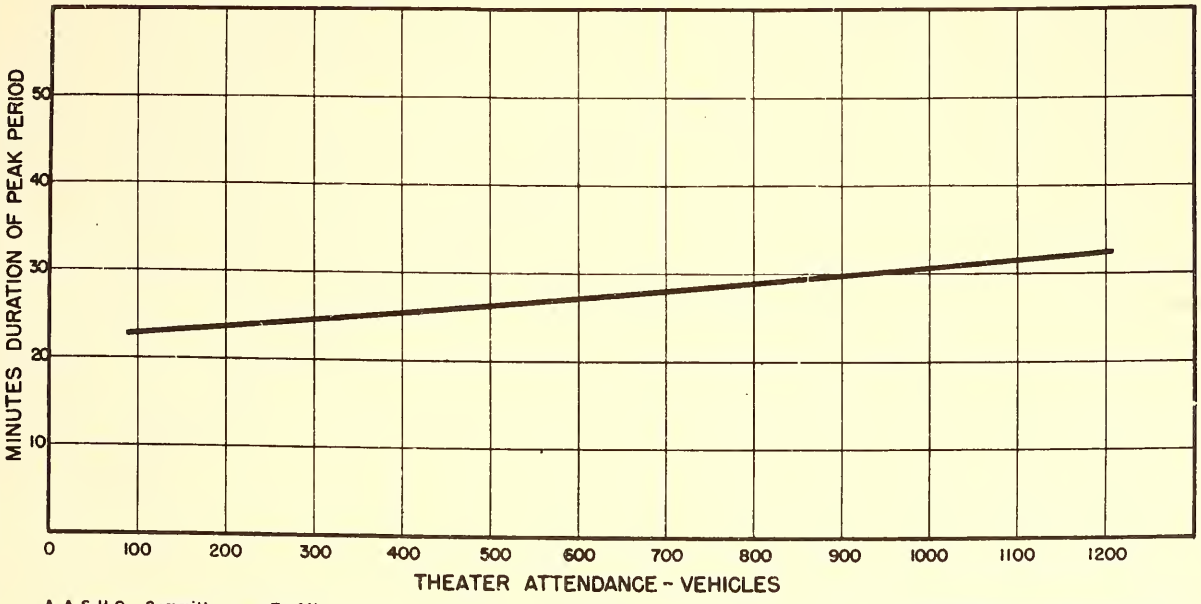
This removal of theater patrons from highway traffic so as not to disrupt its flow is the chief concern of highway and traffic officials. The manner in which this removal takes places, so long as it is expeditiously accomplished is usually secondary to them. In this respect, the theater operator has

two alternatives, namely sufficient ticket gates and personnel to take care of maximum surge of traffic during the peak sales period which will require storage in back of the box office, or storage can be provided in front of the ticket gate. Wherever possible, it is desirable to locate the ticket gates at or near the rear of the theater so as to provide maximum storage in the area between the highway and the ticket gates. Basically, however, the site design will determine where the storage will be.

In response to the initial questionnaire devoted to this study, comments were made on the storage facilities of almost 300 theaters. Seventeen per cent of these theaters were reported as having vehicles store or dam up on the roadway, not consistently but frequent enough to be noticeable. An investigation of the storage facilities of such theaters showed that 71 per cent of them provided for storage amounting to less than 10 per cent of the capacity of the theaters. Of course, this may not be entirely conclusive, but it is indicative wherein a large part of the trouble lies. Added investigation brought out, also, the ticket selling facilities in many of these theaters were insufficient in consideration of theater patronage.

An analysis of the factors involved when storage on the highway is prevalent reveals several factors which have an effect. Probably the foremost, is the ability of the ticket selling arrangement to cope with traffic during peak arrival periods. If the ticket sellers and other theater attendants cannot dispose of the arrivals at a rate equal to or faster than the head way during the peak period, damming on the highway will be inevitable unless storage is provided. Such a situation is more likely to occur before the first show since the second show patrons arrive over a longer period of time. When making provisions for handling the surge of traffic, consideration should

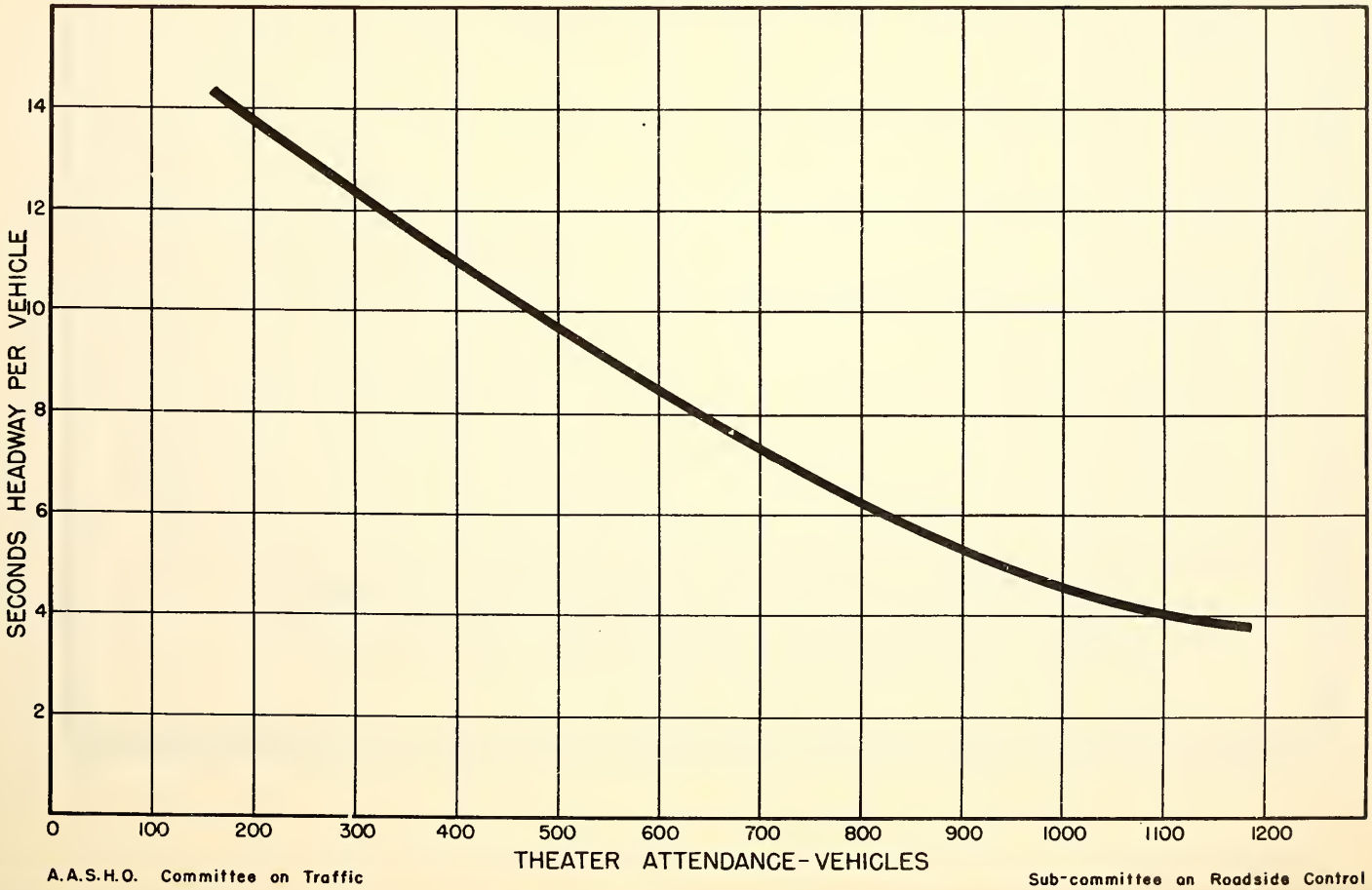
EFFECT OF THEATER ATTENDANCE ON DURATION OF PEAK PERIOD OF ARRIVAL



A. A. S. H. O. Committee on Traffic

Sub-committee on Roadside Control

EFFECT OF THEATER ATTENDANCE ON HEADWAY OF ARRIVING VEHICLES DURING NORMAL PEAK PERIOD



A.A.S.H.O. Committee on Traffic

Sub-committee on Roadside Control

be given to factors over which the theater has no control such as traffic signals in the near vicinity, a signalized railroad crossing in the proximity, or other roadside points of converging traffic. These factors, and probably others, would serve to cause highway damming with resulting low headway and short spurts of concentrated arrivals. They are important in determining the storage capacity in front of the gate.

Many theater owners have done much to forestall a rush at the ticket gates. The box office is open an hour or more before show time and to encourage early arrivals, there are numerous entertaining facilities and activities for all ages. Some of these attractions are mentioned in Chapter I.

Included herein are the results of a special study made at ten representative sample theaters for the purpose of gaining information on such items as rates of arrival of vehicles, accumulation at ticket gate, peak periods, sales facilities, and the effect of theater attendance on the duration of the peak period of arrivals, and the accompanying headway during the peak. The peak period as used in this study can be defined as the interval which will include the heaviest five minute period and all other five minute periods with volumes of 80 per cent of the maximum five minute period.

The assumption is made that the accommodating facilities at all theaters should be designed to absorb and care for the patrons at such a rate as they will arrive during the peak period. Advance plans will go far in determining the extent of the above factors and their effect on the design. In this respect, a flexible arrangement which can be adjusted to meet a changing demand is highly desirable. Such an arrangement was provided in several of the sample theaters with very satisfactory results.

In the theaters studied there could be found peak periods varying from 15 minutes to one hour when the average rate of arrival conformed to the peak

period as defined above. Assuming a relationship between theater attendance, peak period, and headway, two curves have been prepared and are presented to verify such an assumption. These curves may be of some use in predicting a rate of arrival for a particular capacity. A chart accompanies these curves to show the features of the theater which go to make up their style of operation. A study of the data for each theater reveals several interesting facts in regard to the rate of arrivals and the accumulation of vehicles in the storage areas. The effect of ticket gate operation on the accumulation of vehicles is quite noticeable in several instances. Another fact which may not have been previously realized is the large number of patrons arriving during the first show. In a number of cases the peak period extend well into the first show.

No attempt has been made to try to account for or interpret all of the operating characteristics which may be deducted from the data shown. In most cases the conditions during the observations were normal, and since only a single concerted effort was made at each theater, in some respects definite conclusions have been avoided. However, certain patterns of operation can be ascertained and applied to potential plans. However, certain patterns of operation can be ascertained and applied to potential plans. Herein judgment should be used.

In regard to the amount of storage which a theater of a particular size should provide, some conclusions can be drawn by considering existing facilities for theaters of varying capacities. Two tables have been prepared to gain some information on present day tendencies. It is especially noteworthy that irrespective of designed capacity considerably more than half of the theaters now operating have storage facilities amounting to less than 30 per cent of the designed capacity.

AASHO COMMITTEE ON TRAFFIC
Subcommittee on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

THEATER CAPACITY VERSUS STORAGE

Storage Cap. as a % of Theater Cap.	Theater Capacity - Vehicles									
	100 - 200	200 - 300	300 - 400	400 - 500	500 - 600	600 - 700	700 - 800	800 - 900	900 - 1000	Over - 1000
Less than 10%	17%	39%	52%	61%	56%	43%	37%	29%	35%	50%
10% - 20%	33%	28%	17%	22%	8%	11%	28%	33%	44%	29%
20% - 30%	17%	28%	14%	-	-	18%	-	14%	-	-
30% - 40%	33%	5%	-	14%	36%	11%	20%	-	7%	11%
40% - 50%	-	-	7%	-	-	-	6%	14%	7%	5%
50% - 60%	-	-	-	3%	-	11%	3%	5%	-	5%
60% - 70%	-	-	10%	-	-	-	3%	-	7%	-
70% - 80%	-	-	-	-	-	-	-	5%	-	-
80% - 90%	-	-	-	-	-	4%	-	-	-	-
90% -100%	-	-	-	-	-	-	3%	-	-	-
Over 100%	-	-	-	-	-	2%	-	-	-	-

AASHO COMMITTEE ON TRAFFIC
Subcommittee on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

THEATER CAPACITY VERSUS STORAGE CAPACITY

Storage Capacity - Vehicles	Theater Capacity - Vehicles									
	100 - 200	200 - 300	300 - 400	400 - 500	500 - 600	600 - 700	700 - 800	800 - 900	900 - 1000	Over - 1000
Less than 10	17%	11%	17%	18%	17%	11%	3%	5%	7%	-
10 - 20	-	21%	3%	7%	5%	-	-	-	-	-
20 - 30	33%	6%	24%	4%	5%	9%	3%	-	-	-
30 - 40	17%	17%	7%	18%	8%	7%	-	-	7%	-
40 - 50	33%	11%	3%	14%	3%	2%	3%	5%	-	5.5%
50 - 60	-	17%	14%	11%	17%	11%	14%	14%	-	22%
60 - 70	-	11%	-	-	5%	2%	6%	-	-	11%
70 - 80	-	-	7%	4%	3%	-	8%	-	14%	5.5%
80 - 90	-	6%	7%	7%	-	11%	-	5%	7%	5.5%
90 - 100	-	-	-	-	-	-	-	14%	-	-
100 - 200	-	-	7%	14%	22%	18%	28%	19%	43%	28.5%
200 - 300	-	-	10%	3%	14%	11%	20%	14%	-	-
300 - 400	-	-	-	-	-	11%	6%	14%	7%	11%
400 - 500	-	-	-	-	-	-	3%	5%	7%	5.5%
500 - 600	-	-	-	-	-	4%	3%	-	-	5.5%
600 - 700	-	-	-	-	-	-	-	5%	7%	-
700 - 800	-	-	-	-	-	-	3%	-	-	-
800 - 900	-	-	-	-	-	2%	-	-	-	-

The following data is a supplement to the tables and is a bit more enlightening in considering the storage provisions for the average theater of each capacity size.

THEATER CAPACITY	AVERAGE STORAGE AS A % OF CAPACITY
100 - 200 vehicles	20%
200 - 300 vehicles	12%
300 - 400 vehicles	19%
400 - 500 vehicles	13%
500 - 600 vehicles	16%
600 - 700 vehicles	25%
700 - 800 vehicles	24%
800 - 900 vehicles	31%
900 - 1000 vehicles	20%
Over - 1000 vehicles	14%

In evaluating the storage facilities, it was not always possible to determine the location of the storage area, that is, whether it was located in front or in back of the ticket gates. This is a matter which should be coordinated with other features of the theater design.

In view of the results of the investigation on storage, it can be concluded that there are many variables to consider in planning for storage. Each theater needs to be considered individually in order to treat the problem sensibly. It is just as unwise to over provide as it is under provide and requirements should not be fixed on an overall basis but should be flexible to meet the many situations which will prevail, according to experience. On the basis of this experience, the vast majority of the cases will be satisfied if a storage facility of 30 to 40 percent of the design capacity is provided. In a number of cases this estimate can be expanded or decreased to fit the variables as mentioned.

SUMMARY OF SPECIAL STUDIES
DRIVE-IN THEATERS

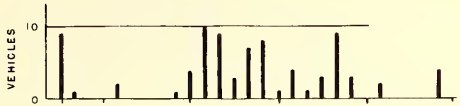
LOCATION	CAPACITY	ATTENDANCE	PEAK PERIOD LEAVING HIGHWAY			AT TICKET GATES					EXIT				STORAGE
			DURATION IN MINUTES	AVERAGE HEADWAY	HEADWAY IN SECONDS DURING MAXIMUM OF FIVE MINUTES	NO TICKET GATES	NO CASHIERS	AVERAGE HEADWAY	HEADWAY IN SECONDS DURING MAX. OF FIVE MIN.	HOWY. DURING MAX. OF FIVE MIN. NOT CONT. FLOW TO GATE	WIDTH	NO LANES	HEADWAY DURING MAX. OF FIVE MIN.	CONTROL	ACTUAL MAXIMUM STORAGE
1. ARLINGTON, VA.	1000	331	25	12.0	10.7	2	1			10.0	20	2	2.7	POLICE STOP HIGHWAY TRAFFIC TO CLEAR THEATER	10
2. PHOENIX, ARIZ.	592	408	25	11.5	10.0	2				9.4	24 15	(3)	1.9		10
3. SPRINGFIELD, ILL.	1027	712	30	6.9	5.8	4	(2)			5.5	12 35		4.4 2.7		(27 BEFORE GATES OPEN) 11
4. LINCOLN, NEBR.	676	600	40	8.5	7.7	2	2	8.2			24 24	2 2	2.3 2.6	NONE AT EXIT STOP SIGN AT ARTERIAL	(16 BEFORE GATES OPEN) 8
5. WILMINGTON, DEL.	660	536	25	9.7	7.7	2		11.1	8.8		44	(12)	3.4	POLICE	30
6. OMAHA, NEBR.	750	1029	40	5.2	4.8	2 3 4	1 1 1	8.4 6.0 4.5			18	1 1/2	2.6	POLICE GIVE RIGHT OF WAY TO ONE LANE EXIT TRAFFIC	40
7. MANCHESTER, N. H.	450	450	20	7.1	6.2	1	1	7.5	6.2		11 22		2.1		30
8. ATHOL SPRINGS, N. Y.	750	828	15	5.7	5.0	1 2				8.6 5.1	40	3	1.6	TRAFFIC SIGNAL-MANUAL CONTROL	10
9. YORK, NEBR.	375	217	20	11.4	10.3	2	2	11.1		NO	INFORMATION				2
10. COLUMBUS, OHIO	712	457	60	12.8	9.4	2	1	15.9	9.4		18	2	2.9	POLICE AND THEATER EMPLOYEES	15

A.A.S.H.O. Committee on Traffic

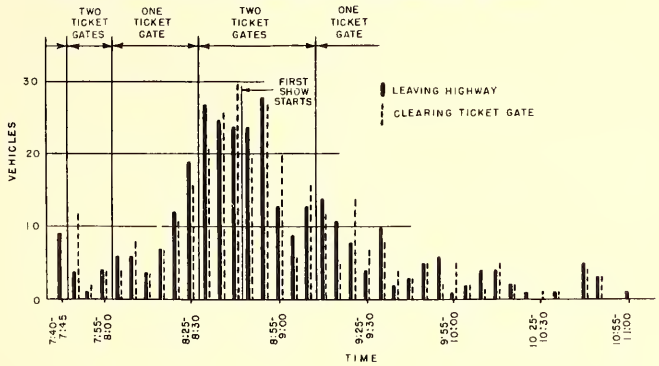
Sub committee on Roadside Control

AIRPORT DRIVE-IN THEATER
HIGHWAY U. S. 1
ARLINGTON, VIRGINIA

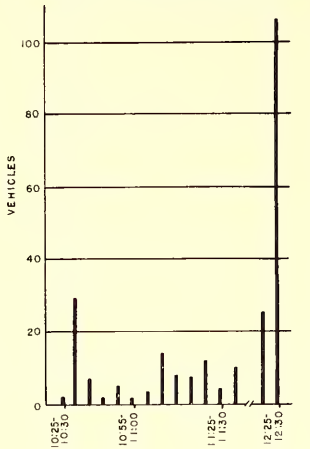
ACCUMULATION OF VEHICLES IN STORAGE AREA



RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD



VEHICLES LEAVING THEATER

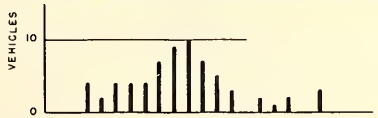


AASHO Committee on Traffic

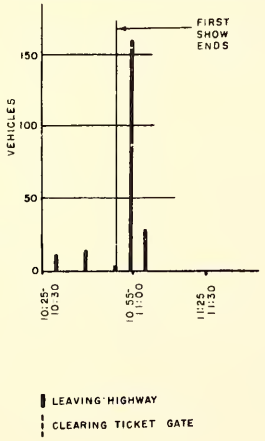
Subcommittee on Roadside Control

DRIVE-IN THEATER
HIGHWAY U. S. 60
NEAR PHOENIX, ARIZONA

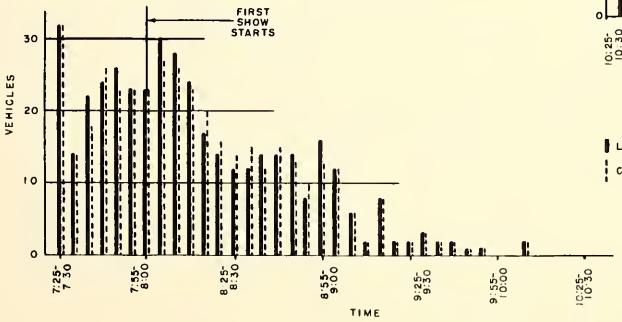
ACCUMULATION OF VEHICLES IN STORAGE AREA



VEHICLES LEAVING THEATER



RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD



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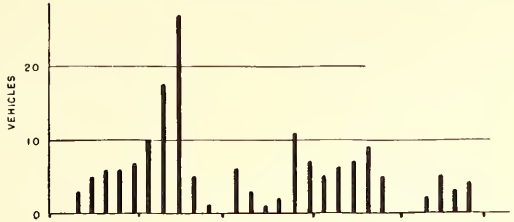
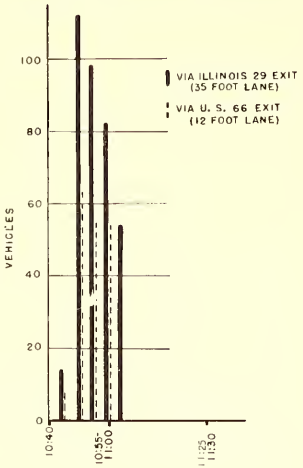
DRIVE-IN THEATER
HIGHWAY ILLINOIS 29 AT JUNCTION U. S. 66
NEAR SPRINGFIELD, ILLINOIS

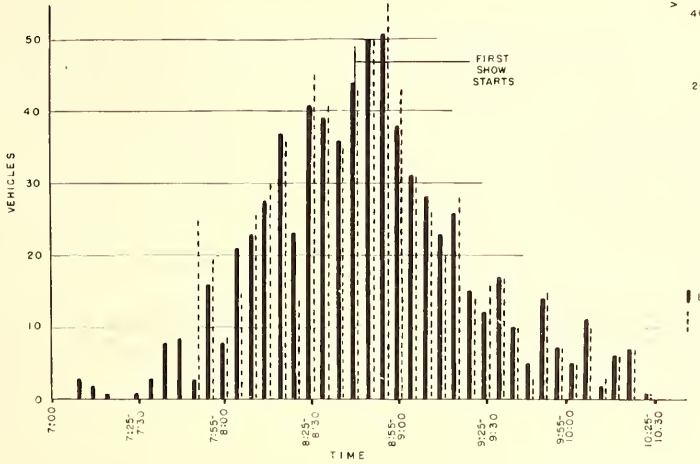
ACCUMULATION OF VEHICLES IN STORAGE AREA



VEHICLES LEAVING THEATER



RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD



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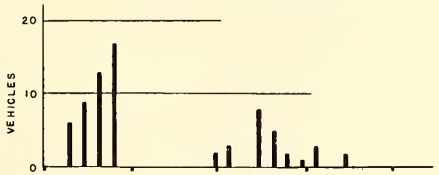
STAR VIEW DRIVE-IN THEATER
VINE STREET AT 48TH
LINCOLN, NEBRASKA

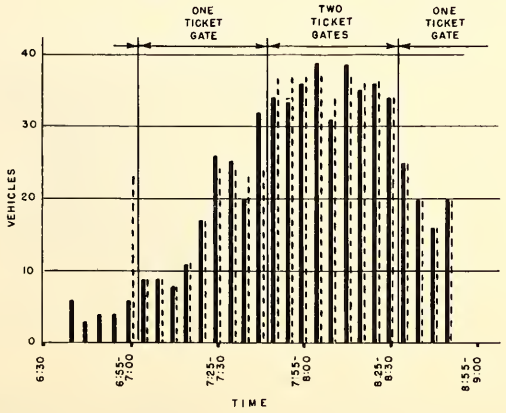
ACCUMULATION OF VEHICLES IN STORAGE AREA



LEAVING THEATER AT EXIT
TWO LANES
129 CARS/5 MINUTES

LEAVING VINE STREET AT 48TH
TWO LANES—STOP SIGN
115 CARS/5 MINUTES

RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD

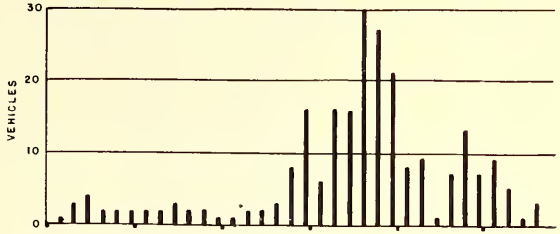


LEAVING HIGHWAY

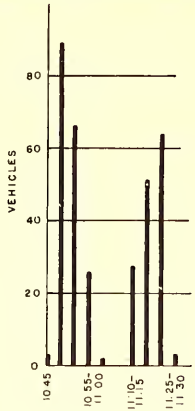
CLEARING TICKET GATE

BRANDYWINE DRIVE-IN THEATER
HIGHWAY U. S. 13
NEAR WILMINGTON, DELAWARE

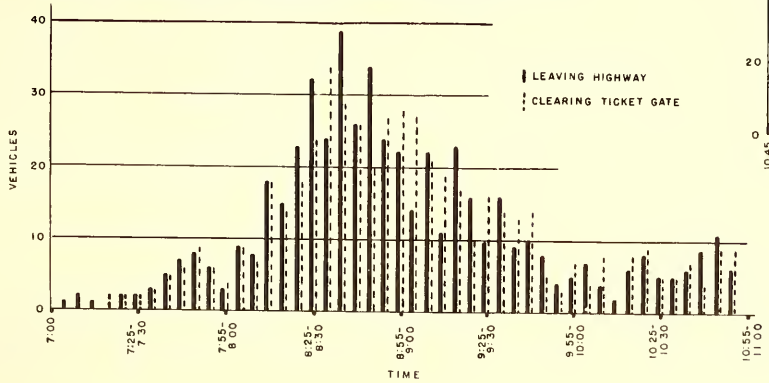
ACCUMULATION OF VEHICLES IN STORAGE AREA



VEHICLES LEAVING HIGHWAY



RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD

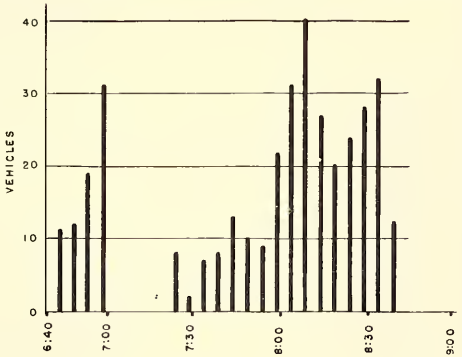


AASHO Committee on Traffic

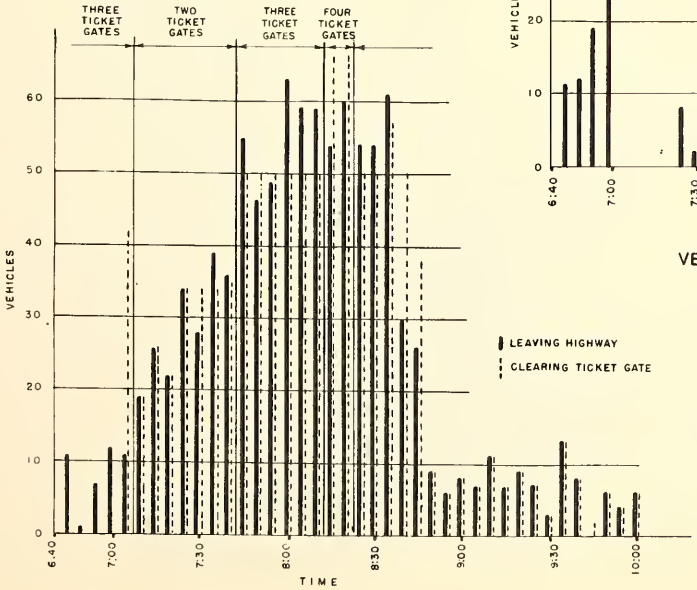
Subcommittee on Roadside Control

DRIVE-IN THEATER
HIGHWAYS U. S. 6, 30A, 275
ONE MILE WEST OF OMAHA, NEBRASKA

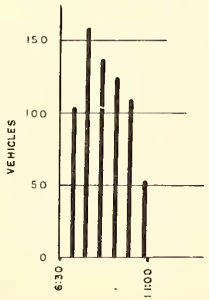
ACCUMULATION OF VEHICLES IN STORAGE AREA



RATE OF ARRIVAL OF VEHICLES



VEHICLES LEAVING THEATER

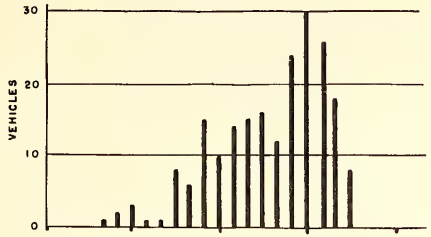


AASHO Committee on Traffic

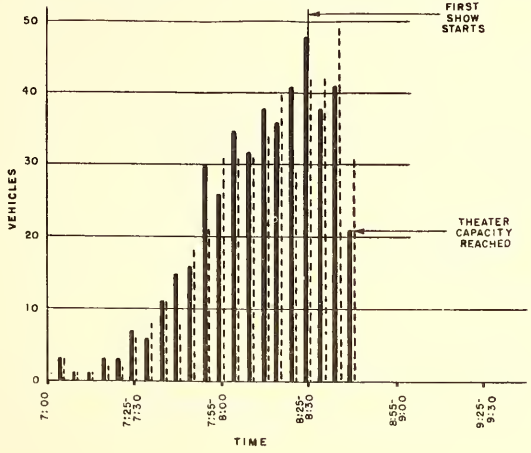
Subcommittee on Roadside Control

HOOKSETT SKY RAY THEATER
HIGHWAY U. S. 3
FIVE MILES NORTH OF MANCHESTER, NEW HAMPSHIRE

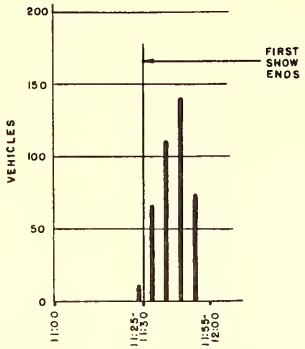
ACCUMULATION OF VEHICLES IN STORAGE AREA



RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD



VEHICLES LEAVING THEATER



LEAVING HIGHWAY

CLEARING TICKET GATE

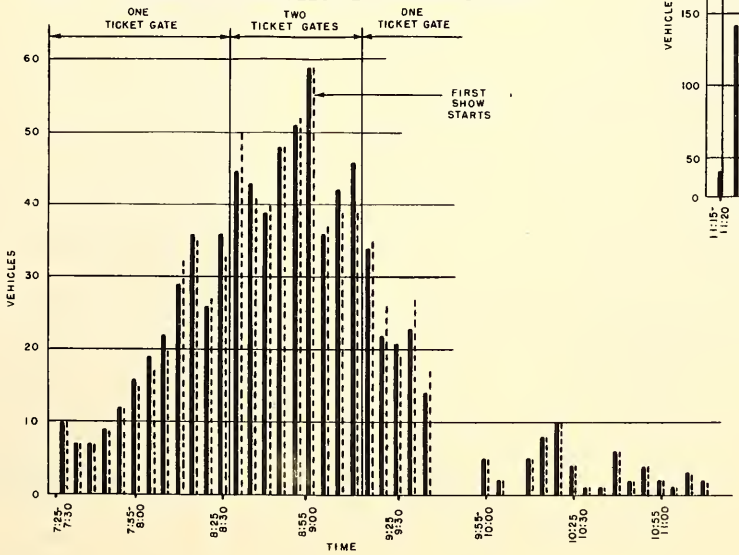
AASHO Committee on Traffic

Subcommittee on Roadside Control

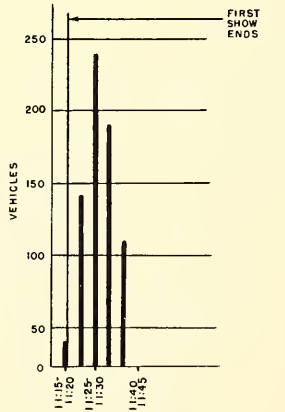
SKYWAY DRIVE-IN THEATER
HIGHWAY N.Y. 5
NEAR ATHOL SPRINGS, NEW YORK

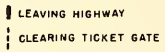
ACCUMULATION OF VEHICLES IN STORAGE AREA

RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD



VEHICLES LEAVING THEATER



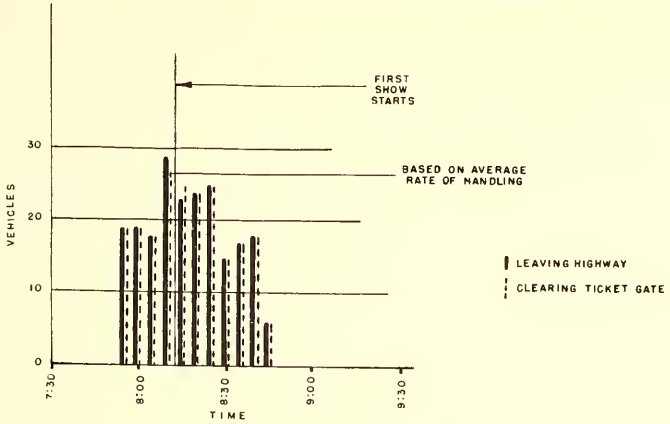


AASHO Committee on Traffic

Subcommittee on Roadside Control

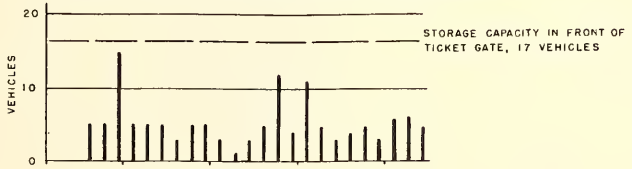
THE PINES DRIVE-IN THEATER
HIGHWAY U. S. 81
YORK, NEBRASKA

RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD

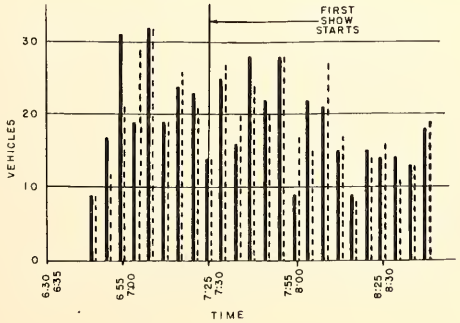


MILES DRIVE-IN THEATER
HIGHWAY U.S. 40
EAST OF COLUMBUS, OHIO

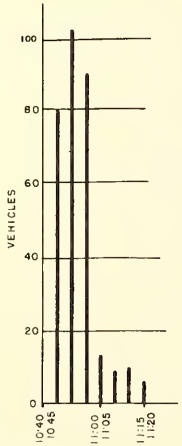
ACCUMULATION OF VEHICLES IN STORAGE AREA



RATE OF ARRIVAL OF VEHICLES PER 5-MINUTE PERIOD



VEHICLES LEAVING THEATER



AASHO Committee on Traffic

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CHAPTER V

PERMITS FOR APPROACH ROADS

Many state authorities have expressed the thought that new legislation may be necessary in handling the drive-in problem. Fortunately, most states already have laws which give their highway authorities jurisdiction to regulate the manner in which access to state highways is provided. Those laws coupled with other fairly broad powers required to promulgate regulations in the interest of traffic safety can possibly serve as an embryo for the solution to many drive-in problems. Through the exercise of these powers state administrators may require an application for a permit to obtain access to state highways establish the location of the entrance within the limits of the owners property and dictate the design of the entrance itself. It should be noted that such administrator cannot prohibit access. A feasible and expedient means, then, of exercising some control of drive-in theater enterprises is the expansion and utilization of the system of permit requirements for access to a state highway

There have been included, herein, several samples of permits used by other states with agreements, and applications for permits to gain access to state highways. It would be difficult for this committee to prepare a permit form which would include all of the necessary provisos due to the varied interests and authority which exist over the nation. However, some of the main considerations are pointed out in this chapter for such application as might fit each case.

The requirement of an access permit has much value in preventing the promiscuous erection, on state highways, of drive-in theaters of other similar enterprises, and access roads to them, before authorities who are responsible for and trained in highway safety have sanctioned the design and operating features. One of the problems has been to inform the public as to the permit

requirement. Frequently roadside enterprises have been well started before this matter is brought to their attention. Considerable alertness on the part of the administrators of this regulation is necessary to insure its effectiveness.

An application should be required to obtain a permit. Such application should include a site plan which would show the design intentions of the owner. The acceptance of the plan, with revisions if need be, should be made a part of the final permit.

The agreement features in the permit are all-important so that the responsibilities of both the owner and the state are clearly understood.

The permit should obviously include the name of the owner or owners, or company or corporation legally responsible, and a description of the theater location.

The owner should not be permitted to alter the drainage in the side ditches, or to cause additional drainage over the road surface because of the driveway. This usually requires the installation of a drainage structure under the driveways and may require some form of drop inlets.

The approved plan of entrances, exits, right of way widths, drainage and lighting and any other traffic control device should be made a part of the permit agreement. This plan should not be altered in any way without the approval of the authorized state highway official.

The owner should not be permitted to allow vehicles to store on the roadway. Although he has not authority to regulate vehicles on the highways, he can accomplish this requirement through the provision of adequate storage facilities off the highway and the use of sufficient ticket gate operators.

The form of traffic control to be used at the entrances and exits should

be decided upon and the responsibilities of the owner clearly outlined. This may be the provision of deputized traffic theater employees or some traffic control device. If left turns are to be prohibitied the owner should agree to assist in this restriction by the use of signs and instructions to his patrons by pamphlet and screen trailers.

The agreement should exclude the responsibility of the highway department in the event of damage to driveways through routine maintenance activities and in the event of highway relocation or improvement at some future date.

The owner should be required to furnish a deposit to insure the satisfactory completion of the construction work set forth in the agreement. Such deposit should be returned as soon as this is done.

The owner should be required to keep all advertising signs on his own property. In the event special warning signs or other traffic control devices are necessary he could be required to defray the cost of such signs and devices. The actual installation and maintenance of such signs and devices should be done by the state.

In the event that any of the provisions of the agreement are violated the owner should understand that this violation would constitute grounds for the revocation of the permit.

In most states the issuance of driveway permits is the function of the district engineers. It is entirely possible that in the majority of cases this arrangement is satisfactory. It is believed, however, that in whomever this authority is vested in the case of drive-in theaters or similar activity, there should exist a sound knowledge of traffic engineering principals to insure the proper handling of the traffic operation features as well as that of drainage and maintenance.

A G R E E M E N T

THIS AGREEMENT, made and entered into by and between the Lincoln Realty Corporation, 260 Tremont, Boston, Massachusetts, hereinafter referred to as the "Corporation", Party of the First Part, and the State of Nebraska Department of Roads and Irrigation, hereinafter referred to as the "State", Party of the Second Part.

WITNESSETH:

WHEREAS, the corporation has requested permission from the State to construct an entrance road and an exit road, hereinafter referred to as the "approach roads", from its proposed outdoor theater to the north side of Highway No. U. S. 6 in the vicinity of 76th and West Dodge Streets, and

WHEREAS, the State is willing to grant permission to the Corporation for the construction of these approach roads on the highway right of way under the conditions herein set forth and in accordance with the details shown on Plan No. 145 hereinafter referred to.

NOW, THEREFORE, in consideration of these facts the parties hereto agree as follows:

Section 1. The State hereby grants to the Corporation permission to enter upon its right of way in the vicinity of 76th and West Dodge Streets west of Omaha in Douglas County, and to construct thereon at the expense of the Corporation the approach roads above mentioned from its property to the north side of the State's paved Highway No. U. S. 6 at this location.

Section 2. It is agreed that State Plan No. 145, prepared by the State, showing the details of construction and location of these approach roads shall be made a part of this agreement. A print of said plan is hereby attached to this agreement.

Section 3. The Corporation agrees to construct the approach roads strictly in accordance with the above mentioned plan and to make the necessary adjustment in the drainage facilities from the existing highway flume on the north side of the pavement, as indicated in this plan. Any alterations or changes in this plan must first receive the approval of the State before such changes or alterations can be used in the construction of the approach roads and drainage facilities.

Section 4. The Corporation agrees to provide sufficient storage space outside the limits of the highway right of way for patrons waiting to enter the theater in order that the paved surface of the highway will not be obstructed by said patrons.

Section 5. The Corporation agrees to assist and cooperate with the State in its regulation prohibiting left turning movements on the highway pavement at the entrance and exit to its property.

Section 6. The Corporation agrees to limit the egress and ingress of all vehicles on these approach roads to a single lane of traffic unless another traffic pattern is recommended or approved by the State.

Section 7 In addition to all provisions set forth above and called for in the plan attached hereto, the Corporation agrees to cooperate with the State to the fullest extent in controlling traffic at these two approach roads, so that a continuing hazard will not be introduced to highway traffic, and said traffic on the highway will have free and unobstructed movement at all times as desired by the State. Should undesirable or dangerous conditions caused by these approach roads present themselves in the future the Corporation agrees to take such steps as may be determined by the State in order to correct these conditions.

Section 8. The failure by the Corporation to abide by the terms of this agreement may be considered as justification for the revocation of the permit incorporated herein.

Section 9. It is mutually agreed that the rules and regulations, dated August 10, 1945, and pertaining to commercial approach roads to State Highways, are hereby through reference made a part of this agreement.

Section 10. The Corporation agrees that no advertising of any nature will be placed on or overhanging the highway right of way.

Section 11. It is mutually agreed that the State will assume no responsibility for damage to the approach roads in any way as may be caused by its operations on the highway right of way or by the use of the highway by others.

Section 12. Should further developments of the highway, either by construction or maintenance, require the revision, relocation or removal of these driveways the Corporation agrees to perform such work at its own cost and expense and as directed by the State.

Section 13. The Corporation agrees to deposit with the State a certified check in the amount of $250.00 as a guarantee of the faithful compliance to the terms of this permit as it pertains to the construction of the approach roads and the alteration of the drainage facilities. When the work covered by the attached plan has been satisfactorily completed and accepted by an authorized representative of the State this check will be returned to the Corporation.

Section 14. The Corporation agrees to notify District Engineer Edwin Olmstead of Lincoln at least 48 hours in advance of the time it expects to begin any work on the highway right of way.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their proper officials thereunto duly authorized as of the dates below indicated.

Executed by the Corporation this 8th day of December, 1947

WITNESS: LINCOLN REALTY CORPORATION

/s/ Charlotte Gelin /s/ Philip Smith, Pres

Executed by the State this 17th Day of December, 1947.

WITNESS: STATE OF NEBRASKA
DEPARTMENT OF ROADS AND IRRIGATION

/s/ Orpheus L. Polk By /s/ Wardner G. Scott
State Engineer

RECOMMENDED AS TO FORM:

H. S. S.

RECOMMENDED: APPROVED:

/s/ John McMeekin /s/ F. H. Klaetsch
Maintenance Engineer Chief Highway Engineer

DRIVE-IN, OR OUTDOOR THEATER

A G R E E M E N T

THIS AGREEMENT, in triplicate, made and entered into by and between_____
Name of Drive-in Theater Owner

_____, Hereinafter referred to
Home Office Location

as the "Owner", Party of the First Part, and the State Highway Department of Missouri, hereinafter referred to as the "State", Party of the Second Part.

WITNESSETH:

WHEREAS, the Owner has requested permission from the State to construct an entrance (entrances) and an exit, hereinafter referred to as the "approach roads", from his proposed outdoor theater_____

_____

_____
Location in detail

and

WHEREAS, the State is willing to grant permission to the Owner for the construction of these approach roads on the highway right of way under the conditions herein set forth and in accordance with the details shown on Plan _____ hereinafter referred to.

NOW, THEREFORE, in consideration of these facts the parties hereto agree as follows:

SECTION 1. The State hereby grants to the Owner permission to enter upon its right of way in the vicinity of _____

_____

_____
Location in detail

and to construct and thereafter maintain thereon at the expense of the

Owner the approach roads above mentioned from its property to the

_____ of the State's Highway No._____
North South East West
at this location.

Section 2. It is agreed that Plan _____, showing the details of construction and location of these approach roads shall be made a part of this Agreement. A print of said Plan is hereby attached to this Agreement.

Section 3. The Owner agrees to construct the approach roads strictly in accordance with the above mentioned plan and to make the necessary adjustment in the drainage facilities, as indicated in this Plan. Any alterations or changes in the Plan must first receive the approval of the State before such changes or alterations can be used in the construction of the approach roads and drainage facilities.

Section 4. The Owner agrees to provide sufficient storage space outside the limits of the highway right of way as required by the State for patrons waiting to enter the theater in order that the paved surface of the highway, and roadway shoulders, will not be obstructed by said patrons. Such storage space must always provide for at least twenty-five (25%) per cent of the total capacity of the theater, in cars, but may, at the discretion of the State be designated to provide as much as seventy-five (75%) per cent of the capacity of the theater, in cars.

Section 5. The Owner agrees to assist and cooperate with the State in its regulation prohibiting undesirable or illegal turning movements on the highway pavement at the entrance and exit to its property. The Owner further agrees, if requested to do so by the State, to furnish a deputized officer to direct traffic entering and/or leaving the theater, in order that all such undesirable or illegal traffic movements may be prevented.

Section 6. The Owner agrees to limit egress from the theater to the designated exit, and ingress to the theater to the designated entrance or extrances. The Owner further agrees that a permanent separation, by means of a fence or permanent barricades will be erected and maintained in such a manner that vehicles seeking exit will of necessity have to use the exit proper, and cannot use the entrance or entrances for exit.

Section 7. In addition to all provisions set forth above and called for in the Plan attached hereto, the Owner agrees to cooperate with the State to the fullest extent in controlling traffic at these approach roads, so that a continuing hazard will not be introduced to highway traffic, and said traffic on the highway will have free and unobstructed movement at all times as desired by the State. Should undesirable or dangerous conditions caused by these approach roads present themselves in the future the Owner agrees to take such steps as may be determined by the State in order to correct these conditions.

Section 8. The failure by the Owner to abide by the terms of this agreement may be considered as justification for the revocation of the permit incorporated herein.

Section 9. It is mutually agreed that the rules and regulations, dated_____, and included in the Excavation Permit No. _____, covering these approach roads to State Highway No. _____, are hereby through reference made a part of this agreement.

Section 10. The Owner agrees that no advertising of any nature will be placed on or overhanging the highway right of way

Section 11. It is mutually agreed that the State will assume no responsibility for damage to the approach roads in any way as may be caused by its operations on the highway right of way or by the use of the highway by others.

Section 12. Should further developments of the highway either by construction or maintenance, require the revision, relocation or removal of these driveways the Owner agrees to perform such work at his own cost and expense and as directed by the State.

Section 13. The Owner agrees to deposit with the State a certified check drawn on a bank in Missouri or trust company, and made out to the State Highway Department, in the amount of $_____ as a guarantee of the faithful compliance to the terms of this permit as it pertains to the construction of the approach roads and the alteration of the drainage facilities. When the work covered by the attached Plan has been satisfactorily completed, the theater placed in operation as described on the Plan, in Excavation Permit No. _____, and in this Agreement, and acceptance has been made by an authorized representative of the State, this check will be returned to the Owner.

Section 14. The State agrees to furnish and erect, and the Owner agrees to bear all material and labor costs, of overhead suspension type flashing signal (s), if the State requires such traffic control device (s) for the proper safe guarding of State Highway traffic. If such control device (s) is (are) erected, the Owner agrees to operate it (them) properly by having it (them)turned on to flash between the hours of _____ and _____ P.M., and turned off and locked at all other times. Lock (s) is (are) to be furnished by the Owner.

Section 15. The State may, at its discretion, furnish and erect two turntable type sign posts, upon which will be mounted reflectorized signs reading "Traffic Officer Ahead". Such signs to be erected a suitable distance from the "approach roads" to and from the theater, and on the right shoulder of the State Highway facing traffic approaching the theater location. If such sign posts and signs are erected, the Owner agrees to turn them to face oncoming traffic approaching the theater location between the hours of

_____ and _____P.M., and to turn them to face away from the State Highway and lock them in that position at all other times. Provided, that such sign posts and signs are not to be erected unless a deputized officer is used to direct traffic as outlined in Section 5 above, of this Agreement. Locks are to be furnished by the Owner.

Section 16. The Owner agrees to notify Division Engineer

_____ of _____ at least 48
Name Location

hours in advance of the time he expects to begin any work on the highway right of way.

IN WITHNESS WHEREOF, the parties hereto have caused these presents to be executed by their proper officals thereunto durly authorized as of the dates below indicated.

Executed by the Owner this _____ day of _____,

19_____.

WITNESS:

_____
Name of Owner

_____ By _____

Executed by the State this _____ day of _____,

19_____.

RECOMMENDED AS TO FORM: MISSOURI STATE HIGHWAY DEPARTMENT

_____ By_____
Division Maintenance Engineer Division Engineer

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS

District No. 1 No._____

P E R M I T

In accordance with Section 78 of Chapter 53, Session Laws of 1937, and/ or Section 3 of Chapter 265, Session Laws of 1943, and subject to all the terms, conditions and provisions written or printed below or on any part of this form

PERMISSION IS HEREBY GRANTED TO Seattle Auto-View Theaters, Inc., c/o Mr. Army Seijas, Smith Tower, Seattle, Washington

to construct a channelization island for left-turn protection and an additional lane for northbound traffic on the easterly side of PSH 1, entrance and exit lanes and deceleration lane to a shoulder width as indicated on the attached plan, on the westerly side of PSH 1 between Seattle and the Duwamish River Bridge, approximately nine hundred feet (900') north of the Duwamish River Bridge.

The channelization island shall be constructed with white reflecting curb and surfaced with asphaltic concrete. The pavement section shall be constructed with asphaltic concrete two and one-half inches ($2\frac{1}{2}$) thick placed over a course of selected roadway borrow six inches (6") in thickness. All materials shall conform with state standard specifications. The State Highway Department in Seattle will stake this project to line and grade as indicated on the attached plan.

Permission is also granted to install on PSH 1 at this location a traffic signal control to effectively regulate the exodus from the abutting property and the flow of traffic on the main highway past this point. This signal control shall be installed in accordance with the attached plan and shall be of a fixed-time type except that manual control may be incorporated within the installation for the direction of traffic by the State Highway Patrol. It is understood through the instrument of this permit that the only manual control to be exercised of the highway traffic shall be by members of the State Highway Patrol or under their direction If, under any circumstances, it is impossible for a member of the State Highway Patrol to be present during the exodus of the theater, that control device shall be operated only in accordance with the pre-determined cycle split determined by the State Highway Department, which may be put into operation by use of the pole-mounted switch. This traffic signal installation shall be turned off at all other times when the exodus from the theater does not exist.

No work shall be done under this permit until the party or parties to whom it is granted shall have cummunicated with and received instructions from

G. W. Swain, Supt., Eumclaw Washington

This permit shall be void unless the work herein contemplated shall have been completed before February 1, 19 48,

Dated at Seattle this 27th day of October, 19 47

Director of Highways

By_____
District Engineer.

STATE OF NEW JERSEY
STATE HIGHWAY DEPARTMENT
MAINTENANCE DIVISION
TRENTON, N. J.

APPLICATION FOR ENTRANCE

New Jersey State Highway Department, Date.....
Trenton, N. J.

Gentlemen:

Application is hereby made by .....

whose address is ..... Phone .....

in behalf of .....

to construct entrances to and on the ..... side of State Highway Route No.....

..... Municipality ..... County

at a point ..... feet ..... (Direction) of ..... (Road, Street or Stream)

It is proposed to use these entrances for access to..... (State Nature of Business)

Attach hereto four (4) copies of a plan showing the proposed location, width and arrangement of drives; distance between drives; setback from the right of way line of highway, of buildings, pumps, etc.; length, size and location of pipe, if necessary; position of existing trees, utility poles, catch basins, manholes, cross-drains, headwalls, directionary and cautionary signs, and curbing if such exist.

The following information must be supplied together with the plans above specified:

Frontage of lot along hwy. ..... Width of existing sidewalk .....

Depth of lot ..... Width of proposed sidewalk .....

Paved width of hwy. ..... Distance between sidewalks and curb .....

Kind of pavement on hwy. ..... Setback from property line of highway:

Width of shoulder on hwy. ..... To buildings .....

Width of right of way on hwy. ..... To gasoline pumps .....

Curb Information: Kind ..... Number of drives desired .....

Height ..... Width ..... Width of drives .....

Distance between drives (Safety Zone) .....

It will be necessary to install ..... feet of ..... inch

..... Kind of Pipe ..... pipe in the side ditch of the highway .....

It is also desired to Excavate / Fill an area of ground on the highway about ..... feet wide

..... feet long, and ..... feet in depth.

Name and address of gasoline distributor .....

.....

Remarks .....

.....

.....
(Signature)

STATE OF NEW JERSEY
STATE HIGHWAY DEPARTMENT
MAINTENANCE DIVISION
TRENTON, N. J.

PERMIT FOR ENTRANCES

Permit No. E ..... Route No. .....

..... Job No. ..... Side
Name of Permittee

..... (Municipality)

..... (County)

..... Date of Permit .....

You are hereby granted permiasion on behalf of .....
Name of Lessee or Owner of Property
to perform the necessary grading, and to construct in accordance with the attached plan ..... entrances to a ..... at a point ..... feet ..... of .....
Direction Road, Street or Stream

FAILURE TO COMPLY WITH THE REGULATIONS ON THE REVERSE SIDE OF THIS PERMIT OR WITH ANY OF THE FOLLOWING SPECIAL STIPULATIONS MAY RESULT IN THE REVOCATION OF THIS PERMIT.

After the completion of the necessary grading you will be required to place upon the surface of the drives crushed stone, road gravel, concrete or other approved paving material to a minimum compacted depth of six inches.

Along uncurbed sections of the highway you will raise the surface of the safety zone eight inches above the surface of the adjacent drives after which this area shall be seeded, sodded or may be otherwise ornamentally planted in such manner as not to debar use by pedestrians.

CURB DEPRESSIONS where required, DRIVEWAYS and SAFETY ZONES are to be constructed in accordance with the regulations printed on the reverse side of this sheet.

Gasoline pumping equipment or sales stands will be placed on your own property ..... feet from the line of right of way of the highway. The exisiting cross section and drainage of the highway will not be otherwise disturbed or altered. The work, if performed, shall be done at your expense, in a sightly and workmanlike manner, of approved material and under the inspection and approval of ..... or his authorized representative.

Signed .....
Superintendent of Maintenance
Acting for New Jersey State Highway Commissioner

SUPERVISOR'S COPY

(OVER)

M&R 505 (REV.)
15M-3-9-48

STATE OF OHIO DEPARTMENT OF HIGHWAYS

APPLICATION FOR PERMIT

SEE INSTRUCTIONS ON BACK OF SHEET

To the DIRECTOR OF HIGHWAYS
Columbus, Ohio

DATE _____

Dear Sir:

Application is hereby made by (1) _____

_____ P.O. Address (2) _____

to (3) _____

_____

_____

_____

at the following described location (4) _____

_____

_____ in _____ County along across S.R. NO. _____

and in accordance with the attached plan (5).

(6) Work will commence on or about _____ and will require _____ days.

(7) If the proposed installation requires the opening of the pavement give the following information.

A. Type of road surface where cut is to be made _____

B. The opening to be made in the pavement will be _____ feet long by _____ feet wide and _____ feet deep.

C. Enclosed please find my certified check for _____ dollars ($_____) covering the cost of the pavement replacement (as per schedule on back of this sheet) if permit is granted.

(8) If this permit is granted I/we agree to comply with all the conditions, restructions and regulations of the Department of Highways in such cases made and required.

(9) *Responsibility:* If this permit is granted I/we hereby agree to backfill the trench of said opening by thoroughly tamping the backfill in six (6) inch layers; also to tamp in the top of that part of said trench which is in the travelled road, a layer of coarse gravel or crushed stone to a depth of not less than six (6) inches; and to maintain the road surface which has been disturbed until such time the pavement can be replaced by the Department of Highways.

(10) I/we also hereby agree to maintain lights, signs, barricades, flagmen, and watchmen for the protection of traffic at all times, day and night, during the work provided for under this permit, and that such instructions given by the Division Deputy as to handling of traffic will be fully complied with.

_____

By _____

TO BE FILLED IN BY DIVISION ENGINEER:

S.R. NO. _____ SECTION _____ COUNTY _____

WIDTH OF R/W _____ FEET WIDTH OF PAVEMENT _____ FEET

POSSIBLE FUTURE EXPANSION _____

Continued on back of page

TYPE OF SURFACE_____THICKNESS_____BASE_____THICKNESS_____

DIVIDED LANE_____, RAISED CURB_____, BERM WIDTH_____

LIMITED ACCESS_____, RECOMMENDED DISTANCE FROM CENTER OF ROAD TO CENTER OF STRUCTURE_____SHALL PERMIT BE GRANTED_____

WHAT, IF ANY, ADDITIONAL REQUIREMENTS ARE TO BE IMPOSED_____

_____

_____
DIVISION ENGINEER

INSTRUCTIONS

(1) Owner of inatallation (application by contractor not acceptable).

(2) Mailing address of Owner.

(3) State fully and completely type of installation.

If pole line give the following information:
Number of poles, total length of line, type of wire, character of service, vertical clearance over pavement, and voltage if power line.

If pipe line give the following information:
Type of service, internal size, length of line, depth of trench, kind of pipe (sewer, oil, gas, etc.) or conduit, and if pipe is to be driven or if pavement is to be opened. All fluid lines require encasement with suitable material, size and length satisfactory to the Department.

If access approach give the following information:
Type of construction, width, thickness and drainage data.

(4) Give County, State Route, and distance from some geographical point such as intersecting state highways, city or village corporate limits, section lines, county or township highways.

(5) Attach four (4) copies of a plan showing proposed location of structures with reference to pavement and right of way line. If installation crosses the highway, show cross section of present roadway and proposed installation.

(6) Give anticipated dates for beginning and for completion of proposed installation.

(7) No tunnelling will be permitted, and any installation which can not be made without opening the pavement requires the applicant to reimburse the State for costs in replacement of the pavement.

(A) Give both base and surface types if combination type pavement.
(B) Give specific dimensions since pavement replacement costs will be checked against information.
(C) A certified check, payable to Treasurer, State of Ohio, must accompany application for opening pavement. The amount of the check shall be based on the following schedule of fees.

LIST OF PRICED CHARGED FOR PERMITS TO CUT INTO A STATE ROAD

The charges for cutting into the road will be: $5.00, plus the following rate per foot and square yard for the particular type of road surface as given below:

TYPE OF ROAD SURFACE		
Brick, Concrete and Bituminous Concrete	(For each lineal foot of trench cut when the width is eighteen inches or less	$1.80
	(For each additional square yard cut	7.75
Bituminous Macadam and Surface Treated Macadam	(For each lineal foot of trench cut when the width is eighteen inches or less	$1.25
	(For each additional square yard cut	4.75
Gravel and Stone	(For each lineal foot of trench cut when the width is eighteen inches or less	$0.25
	(For each additional square yard cut	1.50

Six (6) copies of application are required. After reading the rules and regulations carefully, make a sketch of the proposed driveway on the back of each copy in blank space provided, or if you have blue prints or drawings, attach a set to each copy of the application.

FORM 591

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DRIVEWAY PERMIT

District _____

Serial No. _____

WHEREAS _____, hereinafter termed the
(Name of Applicant)

applicant, requests permission and authority to construct (a driveway) described as follows:
(driveways)

_____

_____

_____

_____

_____
(See instructions for making sketch of proposed driveway)

on the right-of-way of State Highway Number_____ in _____

Parish, adjacent to his property located_____miles _____ from
(direction)

_____
(Road junction, city limits, or other easily described point.)

subject to the following restrictions:

FIRST: That applicant is the owner of the property and that any driveway or approach constructed by him is for the bona fide purpose of securing access to his property and not for the purpose of parking or servicing vehicles on the highway right-of-way.

SECOND: That all driveways, approaches or other improvements on the right-of-way, after having been constructed, shall at all times be subject to inspection and the right is reserved to require such changes, additions, repairs and relocations to be made as may at any time be considered necessary to permit the relocation, reconstruction, widening and maintaining of the highway and/or to provide proper and safe protection to life and property on or adjacent to the highway; that the cost of making such changes, additions, repairs and relocations shall be borne by the applicant.

THIRD: That no driveway, approach or other improvement constructed on the right-of-way as an exercise of this permit shall be relocated or its dimensions altered without the written permission of the chief engineer.

FOURTH: That the applicant agrees to hold harmless the Department of Highways and its duly appointed agents and employees against any action for personal injury or property damage sustained by reason of the exercise of this permit.

FIFTH: The location, design, and construction of the driveway or driveways described above shall be in accordance with the following rules and regulations:

(a) The frontage of any parcel of property adjacent to a public highway shall be considered to be confined between lines drawn from the intersection of the property lines with the right-of-way lines of the highway to the roadway surface or to the curbing, if any, and perpendicular to the axis of the highway; or if the axis is a curve, to the center of curvature; or a combination of the two. Those lines shall be known as boundaries.

(b) No more than one (1) entrance and one (1) exit shall be allowed any parcel of property the frontage of which is less than two hundred (200) feet. Additional entrances or exits for parcels of property having a frontage in excess of two hundred (200) feet shall be permitted only after showing of actual convenience and necessity. When frontage is fifty (50) feet or less, only a combined entrance and exit is permitted the width of which shall not exceed thirty (30) feet.

(c) The width of any entrance shall not exceed thirty (30) feet measured along the axis of the highway. The width of exits only shall not be over fifteen (15) feet. Area between entrance and exit shall remain unimproved for vehicular travel or parking. This area shall be considered as restricted and may be filled only as hereinafter provided in paragraph (p).

(d) The distance between the inner edges of entrance and exit shall be not less than ten feet where they intersect either the right-of-way line or the road surface.

(e) The grade of entrance and exit shall slope away from the road surface at a rate of not less than one-quarter (¼) inch in one (1) foot or not more than one (1) inch per foot for a distance of not less than ten (10) feet; provided this stipulation does not apply when entrance and exit are constructed in accordance with paragraph (k).

(f) No entrance or exit shall be so constructed that any part of such entrance or exit shall be less than ten (10) feet from the boundaries, as defined above, except for returns, the radius of which shall not exceed fifty (50) feet. In urban areas, or where there is a curb and gutter, the distance from the boundary may be five (5) feet.

(g) The construction of parking areas on the highway right-of-way is specifically prohibited. Those places of business requiring parking space for their customers shall provide same on their own premises.

(h) No driveways parallel to the highway shall be constructed on the right-of-way in front of gasoline pumps or other structure requiring an outside drive. Such pumps and structures are to be located a minimum distance of ten (10) feet from the right-of-way line in order that the outside drive shall not encroach on the right-of-way.

(i) Drainage in highway side ditches shall not be altered or impeded and the applicant must provide, at his expense, suitable and approved drainage structures at entrances and exits. The distance between pipe culverts under entrance and exit shall be not less than ten (10) feet.

(j) When curbing or curb and gutter is to be removed the application shall be accompanied by a certified check, the amount of which shall be equal to two ($2.00) dollars multiplied by the number of linear feet of curbing or curb and gutter to be removed. This guarantee deposit will be returned to the applicant upon satisfactory completion of the work.

(k) When curb and gutter is removed the entrance and exit shall be constructed of concrete and the curbing along the highway shall be returned into the entrance and exit on a radius of not less than three (3) feet nor more than ten (10) feet. The grade of concrete entrances and exits shall conform the grade of sidewalks, if any, and a neat junction between the apron of the entrance and exit and the sidewalk shall be made.

(l) All entrances and exits shall be so located that vehicles approaching or using them will be able to obtain adequate sight distance in both directions along the high way in order to maneuver safely and without interfering with traffic.

(m) The same material may be used for driveways that is used to surface the premises unless the character of traffic or adjacent improvements require concrete.

(n) No entrance or exit at the intersection of two state highways shall be within the area between lines drawn perpendicular to the center-line, or axis, of the highway from points on the right-of-way lines a distance of 25 feet from the intersection of said right-of-way lines; provided that this distance may be reduced at the discretion of the chief engineer to 15 feet in case of a highway intersecting a street; further provided that at intersections where additional right-of-way has been secured for the highway back of the prolongation of the normal right-of-way lines in order to provide for the channelization of traffic, or more adequate sight distance, no part of any entrance or exit shall be permitted to encroach on such additional right-of-way. The areas described above shall be considered as restricted areas and may be filled only as hereinafter provided.

(o) No entrance or exit at or near a highway intersection where one or both of the highways has a medial divider or neutral ground, at crossings in esplanade, at bridges or other points of special hazard shall be so located that any part of such entrance or exit, except returns, shall be within the following restricted areas:

1. Those portions of the right-of-way shown as restricted areas on the Department of Highways' standard drawings of approaches and restricted areas which are published in pamphlet form and become a part of this permit, as required.

2. Those portions of the right-of-way that, because of their proximity to special traffic facilities, any entrance or exit constructed thereon would, in the opinion of the chief engineer, constitute an undue hazard or cause undue delay and congestion.

(p) The area between entrances and exits, and those portions of the right-of-way which have been defined hereinabove as restricted areas, may be filled in only when the following requirements have been fully complied with.

1. That surface drainage shall be provided so that all surface water on the filled in areas shall be carried away from the highway roadbed in a suitable manner.

2. That the drainage opening underneath the filled in area shall be adequate to carry the water in the highway side ditches.

3. That the entrance and/or exit shall be of concrete with six (6) inch vertical curbs and that the filled in area shall be separated from the highway by a curb and gutter of not less than two (2) feet over-all width and having a six (6) inch vertical curb. The six (6) inch vertical curbs on the driveways shall be returned on a radius of not more than ten (10) feet nor less than three (3) feet to the line of the existing shoulders, where shoulders are wide, but in all cases to a line not less than twenty feet from the center-line of the highway. The curb and gutter separating the filled in area from the highway shall be along the same line. Surface water shall be carried away from the road surface by a suitable and approved means.

4. When a concrete driveway is to be constructed in connection with the filling in of a restricted area the application shall be accompanied by a guarantee deposit in the form of a certified check, the amount of which shall be equal to $2.00 multiplied by the number of square yards of concrete pavement to be constructed on the highway right-of-way. This deposit is to insure the completion of the work authorized by the granting of the application for permit which it accompanies and will be returned upon notice from the district engineer that the work has been satisfactorily completed.

(q) Data relative to the proposed location, relocation, design and construction of driveways and approaches as may be required by the chief engineer shall be furnished by the applicant free of cost. The applicant shall make any and all changes or additions necessary to make the proposed driveways or approaches satisfactory to the chief engineer.

(r) A guarantee deposit of $10.00 in the form of a certified check shall accompany all applications for permits to construct driveways to commercial establishments. This deposit will be returned upon satisfactory completion of the work authorized.

This permit is hereby accepted and its provisions agreed to this_____day of_____,

194____.

(Signed)_____
Owner

_____
Address

Amount of guarantee deposit accompanying application_____

_____

Permit granted this_____ day of_____, 194____

Subject to the following conditions_____

_____

_____
Chief Engineer.

By:_____

SUMMARY OF CONCLUSIONS

In view of the findings included in this Drive-in Theater Survey the following conclusions and recommendations are reached:

Permanence

The drive-in theaters are here to stay and are a permanent factor in the traffic stream.

Responsibility of State Officials

Drive-in theaters being supported by the public are entitled to the support of public officials.

Legal and Administrative Control

County zoning, roadside zoning and limited access legislation is presently in use in so few areas that these instruments have only limited application to the regulation of drive-in theater location. Greater use should be made of these instruments for roadside control.

The majority of state officials have the authority to regulate roadsides in the interest of safer and more efficient highway travel. Under such authority theater owners should be required to obtain a permit for access to state highways subject to prescribed terms relating to the design and operation thereof.

Where no legal authority exits for the regulation of drive-in theaters, an effort should be made to work out the best solution to the theater driveway problems through mutual compromise. Most theater owners are more than happy to follow the recommendations of traffic authorities recognizing that what is best for highway operation is also best for them.

Location

Theaters should not be located on major highways but on secondary roads connecting with the major highway.

Theaters should not be located on major two lane highways.

Theaters should be located in districts already partially built up to avoid the creation of new congestion areas.

Theaters should be located on highways where normal speeds do not generally exceed 40 miles per hour.

Theaters should not be located where view of the entrance is obstructed.

Theater Screens

Theater screens should not be permitted to face the major highway.

Where screens must face the highway, a fence or trees should be used to obscure its view.

Design of Entrances 1/

Normally not more than one entrance should exist for each access road, but where arrival volume is almost evenly divided by direction, individual entries for right and left turns, separated by several hundred feet, should be provided.

On two lane roads where left turns are permitted the entrance should not exceed 40 feet in width.

On three or more lane highways where left turns are prohibited the entrance lane should not exceed 14 feet in width.

1/ Idaho prefers to hold the entrance widths to a maximum of 30 feet rather than 40 feet, even where left as well as right turns are permitted. Also, instead of specifying the speeds of right and left turn movements to be accommodated by the design, they recommend certain radius values for each of several conditions. In particular, Idaho suggests that a 30-foot corner radius be used for right turns except when speed-change lanes are provided, in which case the 50-foot radius is acceptable. On left turns, their preference is for the 10-foot corner radius.

On three or more lane highways where left turns are permitted the entrance should not be over 19 feet wide.

Entry turn speeds of 20 miles per hour should be provided for right turn movements.

Entry turn speeds of 10 miles per hour should be provided for left turn movements.

Not more than one exit should exist for each access highway, and no more than one lane should be permitted for each direction of travel.

Where left turns are prohibited, the exit should not be more than 14 feet wide.

Where left turns are permitted, the exit should not be more than 19 feet wide with a small island in the throat.

Acceleration and deceleration lanes should be used if possible.

Cuts should not be made in the medial island on multi-lane highways to permit left turn movements.

Where breaks in the island are provided, they should include provision for special left turn deceleration and acceleration lanes.

Vehicle Storage

The majority of the theaters have been built with adequate storage facilities.

The problems of storage between the ticket gates and the highway are primarily a function of the number of ticket gates. Out of ten theaters studied the maximum accumulated storage was only 40 vehicles.

One ticket gate should be used up to 300 car capacity theaters. Three ticket gates should be used up to 600 car capacity theaters. Three ticket gates should be used up to 800 car capacity theaters, and four ticket

gates should be used up to 1000 car capacity theaters. The above assumes that the theaters operate at capacity.

Storage facilities need not be greater than 30 to 40 percent of the theater capacity.

Traffic Control

Few theaters now use traffic signals.

Due to the unusually short peak periods the use of traffic signals is questionable.

The MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS includes warrants which could be applied to the drive-in theater situation. It is questionable, however, whether these warrants were intended for situations involving such short periods of use found at drive-in theaters.

If traffic signals are used, they should be of an actuated type.

Flashing beacons should be used only where limited sight exists.

Traffic control is best handled manually.

Traffic officers could be deputized theater employees, local police, county sheriff or state police.

Left turns at entrances and exits should be prohibited on the highway where possible.

Theater signs should not be permitted on highway right of way.

Highway lighting is important even where theater floodlights seem to be sufficient.

"No Parking" signs should be used to prevent stopping or standing of vehicles on the shoulders or pavement.

Speed signs should not be used unless other factors are involved.

Continued Research

Although considerable data is included in this report and the conclusions reached appear reasonable, there is need for continued study of this problem to keep abreast of the constant new demands of the public on drive-in theaters and improved techniques of management in their operation.

INVENTORY OF QUESTIONNAIRE REPLIES

The following tables and summary are an inventory of the answers to questionnaires sent to all state highway departments. Information was received from almost all the states, and even the Territory of Hawaii, on more than 350 theaters. The response was excellent and much valuable data were derived along with many pertinent and informative personal opinions and observations by prominent traffic authorites.

While these tables may not be all-inclusive of the data submitted, they are compiled to present the more significant facts when attempting to evaluate the various aspects of drive-in theater features. The accompanying summary may supply other data as may be desired.

(Fill out one for each outdoor theater in state)

ASSHO COMMITTEE ON TRAFFIC
Subcommittee on Roadside Control
Outdoor Theater Problem

State reporting_____By_____Title_____

Theater location: Date built_____

In or near what city_____Urban area____, Rural Area___

Highway number or street name_____

Major highway_____ Minor highway_____ Side Road_____

Highway design adjacent to theater:

Lanes: 2____ 3____ 4 undivided____ 4 divided____ Special____

Surface: Concrete____ Black top____ Brick____ Other____

Grades %: 0-3____ 4-6____ 7 over____

Sight obstructions: Hill____ Curve____ Trees____ Building____

Grade separation: Explain_____

Access facility:

Lanes of entrance_____ Width_____

Lanes of exit_____ Width_____

No channelization (wide open)_____

Attach sketch of entrance plan.

Highway operation:

Volume: Normal, 24 hour annual average_____

During theater operation, maximum hour_____

Speeds: Normal, average_____ 85%_____

During theater operation, average_____85%_____

Accidents: Period_____19____ to_____ 19_____

Fatalities_____ Injuries_____ Property Damage_____

Types, No.: Turning in_____ Leaving_____ Loitering_____

Highway operation: (Continued)

Effect of theater traffic on:

Adjacent intersections_____

_____

Adjacent traffic arteries_____

_____

Traffic control:

None_____ Theater employees_____ City Police_____

State Police_____ Traffic signal_____ Other_____

Left turns permitted on highway: Yes_____ No_____

Theater operation:

Nights of week_____ Hours of nights_____

Time to fill_____ Time to empty_____

No. ticket gates_____ Theater capacity_____

Storage capacity outside ticket gates_____

Vehicles store on highway: Yes_____ No_____

Vehicles congest highway: Yes_____ No_____

Adequate traffic control personnel in theater: Yes_____ No_____

State Authority:

Permit required to locate theater: Yes_____ No_____

Permit required for access: Yes_____ No_____

Authority to control access design: Yes_____ No_____

Authority to prohibit access: Yes_____ No_____

Comments:_____

_____

_____

Supplementary Questionnaire
DRIVE-IN THEATER PROBLEM
AASHO Committee on Traffic
Subcommittee on Roadside Control

State reporting_____

Number of drive-in theaters in State January 1, 1949_____

Location:

Number on State and/or Federal-aid highways _____

Number on County roads _____

Number on Urban extensions of State highways _____

Number on other City streets _____

Legal or administrative authority to regulate choice of site.

AGENCY	FORM OF AUTHORITY		
	ZONING	BUILDING CODE	OTHER (Specify)
State	___	___	_____
County	___	___	_____
Township	___	___	_____
City	___	___	_____
Other unit_____ (Specify)	___	___	_____

Remarks:_____

_____

Legal or administrative authority to regulate design.

AGENCY	FORM OF AUTHORITY		
	ZONING	BUILDING CODE	OTHER (Specify)
State	___	___	_____
County	___	___	_____
Township	___	___	_____
City	___	___	_____
Other unit_____ (Specify)	___	___	_____

Remarks:_____

_____

Legal or administrative authority to prohibit access.

AGENCY	FORM OF AUTHORITY: STATUTE, ORDINANCE OR RESOLUTION (Specify)	FORM OF AUTHORITY: ADMINISTRATIVE POWERS	OTHER (Specify)
State			
County			
Township			
City			
Other (Specify)			

Legal or administrative authority to regulate access. (location, design etc.)

AGENCY	FORM OF AUTHORITY: STATUTE, ORDINANCE OR RESOLUTION (Specify)	FORM OF AUTHORITY: ADMINISTRATIVE POWERS	OTHER (Specify)
State			
County			
Township			
City			
Other (Specify)			

Authority to regulate traffic.

	FORM OF AUTHORITY: STATUTE, ORDINANCE OR RESOLUTION (Specify)	FORM OF AUTHORITY: ADMINISTRATIVE POWERS	OTHER (Specify)
State			
County			
Township			
City			
Other (Specify)			

Types of permits required.

AGENCY	FOR LOCATION	DESIGN OF THEATER	ACCESS	TRAFFIC CONTROL	OTHER (Specify)
State	____	____	____	____	____
County	____	____	____	____	____
Township	____	____	____	____	____
City	____	____	____	____	____
Other_____ (Specify)	____	____	____	____	____

Enclose copies of statues, ordinances or resolutions providing legal or administrative authority. Reference to sections of state statute will suffice for state data.

Enclose copies of agreements, permits and other regulations pertaining to drive-in theaters.

Enclose any record of court action, attorney general's opinions or other data regarding drive-in theaters.

Reported by_____

Title_____

Return to: J. E. Johnston, Traffic Engineer
Department of Roads and Irrigation
Lincoln 9, Nebraska

AASHO COMMITTEE ON TRAFFIC
Subcommittee on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

THEATER CAPACITY VERSUS ACCESS ROADWAY LANES

Theater Capacity	Access Roadway Design			
	2 Lanes	3 Lanes	4 Lanes	6 Lanes
100 - 200	80%	20%	-	-
200 - 300	78%	17%	5%	-
300 - 400	55%	14%	28%	3%
400 - 500	59%	10%	31%	-
500 - 600	54%	12%	34%	-
600 - 700	38%	18%	42%	2%
700 - 800	41%	13%	46%	-
800 - 900	32%	9%	59%	-
900 - 1000	7%	27%	46%	20%
1000 and over	18%	18%	58%	6%

AASHO COMMITTEE ON TRAFFIC
Subcommittee on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

ACCESS FACILITY vs HIGHWAY LANES

ENTRANCES

Number Entrances	Highway Lanes							
	2 Lanes		3 Lanes		4 Lanes		6 Lanes	
	No.	%	No.	%	No.	%	No.	%
1	99	90	31	82	68	74	2	40
2	11	10	7	18	24	26	3	60
TOTAL	110	100	38	100	92	100	5	100

EXITS

Number Exits	Highway Lanes							
	2 Lanes		3 Lanes		4 Lanes		6 Lanes	
	No	%	No.	%	No.	%	No.	%
1	107	87	32	82	72	71	1	20
2	13	11	5	13	25	25	3	60
3	2	1	2	5	4	4	1	20
TOTAL	122	100	39	100	101	100	5	100

AASHO COMMITTEE ON TRAFFIC
Subcommittee on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

NUMBER OF EXITS AND EXIT LANES VERSUS THEATER CAPACITY

No. of Exits	Theater Capacity									
	100 - 200	200 - 300	300 - 400	400 - 500	500 - 600	600 - 700	700 - 800	800 - 900	900 - 1000	Over 1000
1	86%	100%	80%	89%	91%	78%	70%	58%	57%	69%
2	14%		16%	11%	9%	15%	27%	37%	36%	31%
3			4%			7%	3%	5%	7%	
No. of Exit Lanes										
1	50%	20%	24%	25%	20%	24%	27%	26%	7%	32%
2	50%	80%	56%	54%	60%	49%	52%	32%	66%	50%
3				7%	5%	12%	8%	11%	7%	6%
4 or 5			8%	7%	10%	12%	8%	26%	13%	6%
6 and over			12%	7%	5%	3%	5%	5%	7%	6%

AASHO COMMITTEE ON TRAFFIC
Subcommittee on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

NUMBER OF ENTRY AND EXIT LANES VERSUS NUMBER OF ACCESS ROADWAY LANES

No. of Entry Lanes	Number of Access Roadway Lanes			
	2 Lanes	3 Lanes	4 Lanes	6 Lanes
Wide open	14%	11%	7%	-
1	68%	14%	18%	17%
2	18%	64%	47%	50%
3	-	3%	5%	-
4	-	5%	19%	33%
6	-	-	2%	-
8	-	3%	2%	-
No. of Exit Lanes				
Wide open	7%	3%	5%	-
1	36%	28%	23%	17%
2	46%	49%	48%	83%
3	3%	14%	8%	-
4	7%	3%	14%	-
6	1%	3%	2%	-

AASHO COMMITTEE ON TRAFFIC
Subcommittee on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

TRAFFIC CONTROL VERSUS ACCESS ROADWAY DESIGN AND THEATER CAPACITY

	Traffic Control			
Access Roadway	None	Traffic Signal	Theater Employees	Local, County or State Police
2 Lanes	36%	3%	62%	29%
3 Lanes	14%	5%	65%	46%
4 Lanes Divided	11%	2%	44%	49%
4 Lanes Undivided	10%	7%	39%	42%
Theater Capacity				
100 - 200	33%	17%	50%	-
200 - 300	61%	-	22%	17%
300 - 400	52%	4%	26%	18%
400 - 500	33%	-	45%	22%
500 - 600	43%	-	37%	20%
600 - 700	22%	-	37%	41%
700 - 800	34%	-	34%	32%
800 - 900	20%	10%	35%	35%
900 - 1000	17%	8%	33%	42%
1000 and over	6%	6%	69%	19%

AASHO COMMITTEE ON TRAFFIC
Subcommitte on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

THEATER CAPACITY VERSUS TICKET GATES

Theater Capacity	Number of Ticket Gates					
	1	2	3	4	6	8
100 - 200	67%	33%	-	-	-	-
200 - 300	60%	40%	-	-	-	-
300 - 400	34%	62%	-	4%	-	-
400 - 500	24%	73%	-	3%	-	-
500 - 600	12%	78%	-	10%	-	-
600 - 700	9%	66%	2%	23%	-	-
700 - 800	8%	60%	-	29%	3%	-
800 - 900	-	45%	5%	50%	-	-
900 - 1000	-	67%	-	20%	13%	-
1000 and over	-	61%	-	33%	-	6%

	THEATER OPERATION									
NGHTS REERATED	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE		CREATES HY. CONGESTION	ADEQUATE TRAFFIC CONTROL WITHIN THEATER	REMARKS
						CAPACITY	STORAGE ON HIGHWAY YES - NO	YES - NO	YES - NO	
A										Reply made – data later
A 7	4	620	2	1 hr.	15min.	50	Yes	Yes	Yes	Ticket sales begin too late
A 3	3	200	1		30min.		No	Yes	No	Somewhat intermittent operation
		250					No	Yes		Under construction – little trouble antic.
Var.		200	1			0	No	No	Yes	Intermittent operation
		660	2			0	No		Yes	Under construction, well designed
7	4	600	2	½ hr.	14min.	20	Yes	Yes	Yes	Sketch
Ca 7	3½	600	2	2-3 hr.	5-15 min.	50	No	No	Yes	
7	3	700	4	½ hr.	10-12 min.	70	Yes	Yes	Yes	Sketch
7	3	818	4	½ hr.	12min.	250	No	Yes	Yes	Sketch
7	3	550	2	½ hr.	13min.	80	No	Yes	Yes	Sketch Screen visible from highway
7	3	650	2	½ hr.	15min.	50	Yes	Yes	Yes	(*)
7	3½	750	2	½ hr.	15 min	150	No	No	Yes	No difficulty
7	6&4	562	2	1 hr.	20 min	120	No	No	Yes	Sketch Slight Sunday problem
7	3½	300	1	½ hr.	10 min	70	No	No	Yes	(*)
7	3	600	2	½ hr.	12 min	80	Yes	Yes	Yes	(*)
7	3	650	2	½ hr.	15 min		No	Yes	Yes	Screen visible from highway (*)
7	3½	600	2	½ hr.	10-15 min	30	Yes	No	Yes	County road (*)
7	6	500	2	1 hr.	12 min	0	No	Yes	Yes	Sketch Zoned
7	6	560	2	2 hr.	20 min	0	No	Yes	No	(*)
7	5	485	2	85min	10 min	40	No	Yes	Yes	(*)
7	6	915	2	2 hr.	15 min	36	No	Yes	No	Sketch
7	5	650	2	½ hr.	10 min	80	Yes	Yes	Yes	Sketch Peak nights offer trouble
7	5	790	4			Ade-quate	No	No	Yes	Sketch Zoned by company
7	5	693	2	2 hr.	12 min	85	No	No	Yes	Sketch
7	6	720	2	1½ hr.	15 min	50	Yes	Yes	Yes	Sketch Has caused considerable trouble
7	5½	600	2	2 hr.	15min	120	Yes	No	Yes	(*)
7	6	689	2			100				Under construction (*)
7	8	520	2	2 hr.	10 min	60	No	No	Yes	Good control (*)
7	4	690	2	1 hr.	25 min	150	No	Yes	Yes	(*)
7	5	650	2	1 hr.	15 min	150	No	No		Access very controlled (*)
7	4	510	4	1 hr.	30 min	30	No	No	Yes	Accel. & Decel. lanes required (*)
	5	700	4	1 hr.	20 min	120	No	No	Yes	Adjacent intersection is congested (*)
	5	777	4	1½hr.	15 min	Ade-quate	No	No	Yes	County Zones (*)
	5	500	2	1 hr.	10 min	50	No	No	Yes	
Connec	3½	490	1		30 min	75-100	No	No	Yes	Sketch
	3½	300	1	1 hr.	15 min	20	Yes	Yes	Yes	Sketch
	3½	600	1			250	No			Sketch
	3½	850	1	1½hr.	25 min	50	No	No	Yes	Sketch
	3½	600	2	1½hr.	20 min	500	No	No	Yes	Sketch
Delawar										No theaters in state

AASHO COMMITTEE ON TRAFFIC
Subcommitte on Roadside Control

INVENTORY - DRIVE-IN THEATER STUDY

THEATER CAPACITY VERSUS TICKET GATES

Theater Capacity	Number of Ticket Gates					
	1	2	3	4	6	8
100 - 200	67%	33%	-	-	-	-
200 - 300	60%	40%	-	-	-	-
300 - 400	34%	62%	-	4%	-	-
400 - 500	24%	73%	-	3%	-	-
500 - 600	12%	78%	-	10%	-	-
600 - 700	9%	66%	2%	23%	-	-
700 - 800	8%	60%	-	29%	3%	-
800 - 900	-	45%	5%	50%	-	-
900 - 1000	-	67%	-	20%	13%	-
1000 and over	-	61%	-	33%	-	6%

NATIONAL DRIVE-IN THEATER SURVEY

BY STATES-INDIVIDUAL THEATERS

CONDUCTED BY A.A.S.H.O. SUBCOMMITTEE ON ROADSIDE CONTROL

| STATE REPORTING | LOCATION: CITY OR NEAR | LOCATION: DISTANCE FROM | LOCATION: HIGHWAY: ROUTE NO. | LOCATION: HIGHWAY: MAJOR | LOCATION: HIGHWAY: MINOR | LOCATION: HIGHWAY: SIDE ROAD | STATE AUTHORITY: LOCATION PERMIT (YES - NO) | STATE AUTHORITY: ACCESS PERMIT (YES - NO) | STATE AUTHORITY: CONTROL OF ACCESS DESIGN (YES - NO) | STATE AUTHORITY: ACCESS PROHIBITED (YES - NO) | DATE BUILT | HIGHWAY DESIGN AT ACCESS: LANES | SURFACE | GRADES | SIGHT DIST | GRADE SEP | ACCESS FACILITIES: ENTRY LANE: NO | ENTRY LANE: WIDTH | EXIT LANE: NO | EXIT LANE: WIDTH | CHANNELIZED (YES - NO) | HIGHWAY OPERATION AT ACCESS: VOLUME: 24 HOUR (BOTH DIRECTIONS) | VOLUME: 8 HOUR (ONE DIRECTION) | SPEED: NORMAL | SPEED: 85 PERCENTILE | ACCIDENTS: PERIOD | ACCIDENTS: FATAL ACC. | ACCIDENTS: INJURY ACC. | ACCIDENTS: PROPERTY DAMAGE | ACCIDENTS: TYPE - NUMBER: TURNING IN | ACCIDENTS: TYPE - NUMBER: TURNING OUT | ACCIDENTS: TYPE - NUMBER: LOITERING | TRAFFIC CONTROL AT ACCESS: NONE | TRAFFIC SIGNAL (YES - NO) | MANUAL: OTHER | MANUAL: THEATER EMPLOYEES | MANUAL: CITY POLICE | MANUAL: STATE POLICE | MANUAL: PHOTO | PHOTO (YES - NO) | THEATER OPERATION: NIGHTS OPERATED | THEATER OPERATION: HOURS OPERATED | THEATER OPERATION: CAPACITY | THEATER OPERATION: NO. OF TICKET BOOTHS | THEATER OPERATION: TIME TO FILL | THEATER OPERATION: TIME TO EMPTY | THEATER OPERATION: STORAGE OUTSIDE OF GATE: CAPACITY | THEATER OPERATION: STORAGE OUTSIDE OF GATE: STORAGE ON HIGHWAY (YES - NO) | THEATER OPERATION: CREATES AN OBJECTIONABLE CONDITION (YES - NO) | THEATER OPERATION: ADEQUATE TRAFFIC CONTROL (YES - NO) | REMARKS |
|---|---|---

ST	THEATER OPERATION									REMARKS
	UNITS REPOATED	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE		CREATES HWY CONGESTION	ADEQUATE TRAFFIC CONTROL WITHIN THEATER
							CAPACITY	STORAGE ON HIGHWAY YES - NO	YES - NO	YES - NO
Flor	7	5½	600	2	1 hr.	10 min	0	No	No	Yes	(*)
	7	3½	250	1			0	No	No	Yes	(*)
	7	4½	300	2				No	No	Yes	Sketch
	7	4	350	2	1 hr.	40 min	0	No	No	Yes	(*)
	7	4	400	2	1 hr.	30 min	70	No	No	Yes	(*)
	7	• 4½	110	1				No	No	Yes	(*)
	7	4½	300	2				No	No		(*)
			450	2							Under Construction (*)
	7	4	355	1	1 hr.	15 min	200	No	No	Yes	Heaviest volume in Florida (rural)
	7	5	422	2	1½hr.	15 min	50	No	No	Yes	(*)
	7	5	500	2	1 hr.	10 min	0	No	No	Yes	(*)
	7	5	400	2	1 hr.	15 min	40	No	No	Yes	(*)
	7	6	450	2			250	No	No	Yes	Sketch # 18
	7	4	300	2	2 hr.		150	No	Yes	Yes	Sketch # 19
	7	5	500	2	1½ hr.		100	No	Yes	Yes	(*)
	7		460	2			30	Yes	Yes		(*)
	7	5	408	2			50	No	No	Yes	Sketch # 20
	7	6	500	2	1 hr.	1 hr.		No	Yes	Yes	(*)
	7	7	365	1			70	No	No	Yes	Sketch #21
	7	5	350	2			0	No	No	Yes	(*) Negroes only
Idal											Reply made - data later
Ill	7	5	750	4	½ hr.	½ hr.		Yes	Yes	Yes	Sketch # 22 No accident data available
	7	5	1000	4	½ hr.	½ hr.		No	Yes	Yes	Sketch # 23 500 car storage inside
	7	5	1666	4	½ hr.	½ hr.		No	Yes	Yes	Sketch # 24 Inside storage Screen visible from road
	7	5	800	4	½ hr.	½ hr.		No	No	Yes	Sketch # 25 Ample storage inside gate
	7	6	400	4	1 hr.	20min	400	No		Yes	Under construction (*)
	7	6	800	2		20min	40	No	Yes	Yes	Congestion clears quickly
	7	4	800	2	1 hr.	20min	200	No	Yes	Yes	(*)
	7	5	680	4	1½hr.	20min	25	No	No	Yes	(*)
	7	4	600	2		15min		No	No	Yes	Entrance adjacent to overpass (*)
	7	6	681	2	1 hr.	15min	200	No	Yes	Yes	Congestion at adjacent intersection (*)
	7		750	2			200				Under construction (*)
	7	4				15min	400	No	Yes	Yes	Adjacent intersection well controlled (*)
	7		531	1			130	No			(*)
	7	4	567	2	30min	20 min	257	No	No	Yes	
	7	4	550	1	45min	10 min	75	No	No	Yes	(*)
Ind	7	5	1000	2	1½hr.	35min	120	No	No	Yes	(*) Operation very good
	7	4	250	1	1 hr.	20min	10	No	No	Yes	(*) Counties sometimes have location
	7	4	750	1	1½hr.	30min	100	No	No	Yes	(*) permit control in state of
	7	4	800	1	1½hr.	35min	300	No	No	Yes	(*) Indiana. Theater employing
	7	4	750	1	1½hr.	30min	120	No	No	Yes	(*) deputy and
	7	4	550	1	1½hrs.	25min	140	No	No	Yes	(*)

NATIONAL DRIVE-IN THEATER SURVEY

BY STATES-INDIVIDUAL THEATERS

CONDUCTED BY A.A.S.H.O. SUBCOMMITTEE ON ROADSIDE CONTROL

STATE REPORTING	LOCATION: CITY OR NEAR	LOCATION: DISTANCE FROM	LOCATION: HIGHWAY: ROUTE NO.	LOCATION: HIGHWAY: MAJOR	LOCATION: HIGHWAY: MINOR	LOCATION: HIGHWAY: NON ROAD	STATE AUTHORITY: LOCATION PERMIT YES-NO	STATE AUTHORITY: ACCESS PERMIT YES-NO	STATE AUTHORITY: CONTROL OF ACCESS DESIGN YES-NO *	STATE AUTHORITY: ACCESS PROHIBITED YES-NO	DATE BUILT	HIGHWAY DESIGN AT ACCESS: LANES	SURFACE	GRADES	SIGHT DIS.	GRADE SEP.	ACCESS FACILITIES: ENTRY LANE: NO.	ENTRY LANE: WIDTH	EXIT LANE: NO.	EXIT LANE: WIDTH	CHANNELIZED YES-NO	HIGHWAY OPERATION AT ACCESS: VOLUME: 24 HOUR AVERAGE	VOLUME: MAX HOUR	SPEED: NORMAL	SPEED: @ MAX. HOUR	ACCIDENTS: PERIOD	ACCIDENTS: FATAL ACC.	ACCIDENTS: INJURY ACC.	ACCIDENTS: PROPERTY DAMAGE	ACCIDENTS: TYPE OF COLLISION: TURNING IN	ACCIDENTS: TYPE OF COLLISION: TURNING OUT	ACCIDENTS: TYPE OF COLLISION: LATERAL	NONE	TRAFFIC CONTROL AT ACCESS: TRAFFIC SIGNAL YES-NO	MANUAL: OTHER	MANUAL: THEATER EMPLOYEES	MANUAL: CITY POLICE	MANUAL: STATE POLICE	LEFT TURN PROHIBITED OR LIMITED YES-NO	THEATER OPERATION: NIGHTS OPERATED	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE: CAPACITY	STORAGE OUTSIDE OF GATE: STORAGE ON RIGHT-OF-WAY YES-NO	CREATES HAZARDOUS CONGESTION YES-NO	ADEQUATE TRAFFIC CONTROL DEVICES WITHIN THEATER YES-NO	REMARKS
Florida	Miami		SR7	X			No	No	No	No	'36	2	BT	0-3	No	No	2	12'	1	20'	Yes	12000																												
	Tampa		US541	X			No	No	No	Yes	'40	2	ST	0-3	No	No	1	60'	1	60'	Yes	3750																														
	Tampa		SR45	X				Yes	Yes		'40	2	BT	0-3	No	No	2	20'	2	20'	Yes	5550																														
	Panama City		SR10A	X							'48	2	BT	0-3	No	No	2	12'	2	12'	Yes	3000																														
	Pensacola		SR10A	X							'41	2	BT	0-3	No	No	2	15'	2	15'	Yes	5200																														
	Winter Haven		SR58A		X						'47	2	BT		No	No	2	15'	2	15'	No	3100																														
	Clear Water		US19	X			Yes	Yes	Yes	No	'47	4D	RBST				2	10'	1	20'	No	5400																														
	Jackson-ville		US17	X							'40	2	BT	0-3	No		2	15'	2	18'	No	4700																														
	Lakeland		US92	X				Yes	Yes		'47	2	BT				1	20'	1	20'	No	6500															Co. Pol.	X				Yes	7	4	355	1	1 hr.	15 min	200	No	No	Yes	Heaviest volume in Florida (rural)
	W. Palm Beach		SR80		X		No	No	No	No	'47	2	BT	0-3	No	No	2	12'	2	12'	No	3000																														(*)
	Ft. Lauderdale				X	X	No	No	No	No	'48	2	BT	0-3	No	No	2	10'	1	20'	No																							7	5	500	2	1 hr.	10 min	0	No	No	Yes	(*)
	Hollan-dale					X	No	No	No	NO	'48	2	BT	0-3	No	No	2	20'	1	20'																									7	5	400	2	1 hr.	15 min	40	No	No	Yes	(*)
	Tampa		SR600	X			Yes	Yes	Yes		'40	4D	Conc.	0-3	No	No	2	20'	1	80'	Yes	9300																X			Yes	7	6	850	2			250	No	No	Yes	Sketch # 18
	Orlando		SR600	X								4					2	14'	1	14'	Yes	8000																				7	4	300	2	2 hr.		150	No	Yes	Yes	Sketch # 19
	Ocala		SR25	X								2					2	10'	1	24'	No	4500																				7	5	500	2	1½ hr.		100	No	Yes	Yes	(*)
	Daytona		SR600	X							6-'46	4D					2	30'	1	40'		2300																						7		460	2			30	Yes	Yes		(*)
	St. Peter-sburg		SR687	X			Yes	Yes	No		'41	3					2	20'	1	55'	Yes	6500														Yes		X			Yes	7	5	408	2			50	No	No	Yes	Sketch # 20
	Talla-hassee		SR363	X							'48	2	Conc.			Curve	2		1		No	2950																X			Yes	7	6	500	2	1 hr.	1 hr.		No	Yes	Yes	(*)
	Jackson-ville		SR4JA	X	X		No	No	No	No	'39	2	BT				2	10'	2	10'	No	10000														Co. Pol.	X					7	7	365	1			70	No	No	Yes	Sketch #21
	Jackson-ville		US1	X			No	No	No	No	'47	2	BT	0-3			2	20'	2	20' 35'	Yes	8200														Yes		X	X		Yes	7	5	350	2			0	No	No	Yes	(*) Negroes only
Idand																																																	Reply made – data later
Illinois	Morton Grove		111 58 & 82	X			No	Yes	Yes	Yes	'41	4	Conc BT	0-3	No		2		1			8000		45												Pro-posed		X			Yes	7	5	750	4	½ hr.	½ hr.		Yes	Yes	Yes	Sketch # 22 No accident data available
	Chicago		111.42A	X			No	Yes	Yes	Yes	'45	4	Conc	0-3	No		2	35'	2	35'	Yes	12000		30													X			Yes	7	5	1000	4	½ hr.	½ hr.		No	Yes	Yes	Sketch # 23 500 car storage inside
	Oak Lawn		111. 50			X	No	Yes	Yes	Yes	'48	4	BT	0-3			4	35'	6	50'	No	11000		45	50	40											X				7	5	1666	4	½ hr.	½ hr.		No	Yes	Yes	Sketch # 24 Inside storage Screen visible from road
	La Grange		US12	X			No	Yes	Yes	Yes	'40	4	Conc.	0-3			2	50'	2	30'	Yes	5000		45													X			Yes	7	5	800	2	½ hr.	½ hr.		No	No	Yes	Sketch # 25 Ample storage inside gate
	Grays-Lake		111.120	X				Yes	Yes		'48	2	Conc.	0-3	Trees		4	14' 24'	4	12'	Yes	2200	400	45													X			Yes	7	6	400	4	1 hr.	20min	400	No		Yes	Under construction (*)
	Elmhurst		US20D	X	X			Yes	Yes		6-'48	2	Conc.	0-3	Bldg.		5	50'	2	40'		2440	380														X			Yes	7	6	800	2		20min	40	No	Yes	Yes	Congestion clears quickly
	Milan		US92	X			No	Yes	Yes	No	6-'48	2	Conc.	0-3	No	No	1	38'	2	38'		3800																		X	Yes	7	4	800	2	1 hr.	20min	200	No	Yes	Yes	(*)
	Rockford					X					5-'48	2	BT	0-3	No	No	4	11'	1	40'		1900																		X	Yes	7	5	680	4	1½hr.	20min	25	No	No	Yes	(*)
	Bloom-ington		US51	X			No	Yes	Yes	No	'47	3	Conc.	0-3	No	Yes	4	45'	2	27'	Yes	4500	557															X		X	Yes	7	4	800	2		15min		No	No	Yes	Entrance adjacent to overpass (*)
	Peoria				X		No	No	No	No	10-'47	2	Conc.	0-3	Hill	No	1	50'	1	50'	Yes	1000		40		20		1½ Yr.									Co. Pol.				Yes -	7	6	681	2	1 hr.	15min	200	No	No	Yes	Congestion at adjacent intersection (*)
	"		111.116	X			No	Yes	Yes	No	'48	2	Conc.	0-3	Hill	No	2	10'	2	10'	Yes	2500		50																		7		750	2			200				Under construction (*)
	Spring-field				X		Yes	Yes	Yes	No	8-'47	4	Conc.	0-3	No	No	2	30'	3	80'		3000																X		X	No	7	4				15min	400	No	Yes	Yes	Adjacent intersection well controlled (*)
	Vin-cennes	1 mi.W.	US50	X			No	Yes	Yes	Yes	6-'48	2	Conc.	0-3			2	15'	2	15'	Yes	3320		50					2 Mo.	0	0	0							X		X	Yes	7		531	1			130	No			(*)
	E. St. Louis		US50	X			No	Yes	Yes	No		4D	Conc.	0-3			1	80'	1	80'		7060		38	40	36	38	7 Mo.														7	4	567	2	30min	20 min	257	No	No	Yes	
	Carbon Dale	3.5 W.	Rt.13	X			No	Yes	Yes	No	7-'48	2	Conc.	0-3			4	10'	4	19'		3700	350					1 Mo.	0	0	0							X		X	Yes	7	4	550	1	45min	10 min	75	No	No	Yes	(*)
Indiana	Indiana-polis		US36	X			No	Yes	Yes	Yes	'41	3	Conc.	0-3	No		2	50'	2	30'	Yes	7000	500	50	60	50	60	7 Yr.										X			Yes	7	5	1000	2	1½hr.	35min	120	No	No	Yes	(*) Operation very good
	Indiana-polis		SR67	X			No	Yes	Yes	Yes	'48	2	Conc.	0-3	No		2	30'	2	30'	No	8000	800	50	60	50	60	4 Yr.	0	0	0							X			Yes	7	4	250	1	1 hr.	20min	10	No	No	Yes	(*) Count on several ins have local on
	Greenwood		US31	X			No	Yes	Yes	Yes	'40	4D	CABT	0-3	No		2	50'	2	30'	Yes	5500	450	50	60	50	60	5 Mo.	0	0	0							X			Yes	7	4	750	1	1½hr.	30min	100	No	No	Yes	(*) perm t control ne ation of
	Sellers burg		US31	X			No	Yes	Yes	Yes	'47	2	Conc.	0-3	No		2	40'	2	30'	Yes	4060	300	50	60	50	60	17 Mo.	0	0	0							X			Yes'	7	4	800	1	1½hr.	35min	300	No	No	Yes	(*) ing or... theater ...ations
	Ft. Wayne		SR1-3	X			No	Yes	Yes	Yes	'47	3	Conc.	0-3	No		2	80'	2	40'	Yes	5000	400	50	60	50	60	17 Mo.	0	0	0							X			Yes	7	4	750	1	1½hr.	30min	120	No	No	Yes	(*) dispute ...ed.
	Kokomo		US31	X			No	Yes	Yes	Yes	'40	2	BT	0-3	No	No	2	50'	2	26'	Yes	3000	250	50	60	50	60	5 Mo.	0	0	0							X			Yes	7	4	550	1	1½hrs.	25min	140	No	No	Yes	(*)

@ DURING THEATER OPERATION

(*) Sketch submitted but not included

STATES REPORTED	THEATER OPERATION									REMARKS
	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE		GREATER HY CONGESTION	ADEQUATE TRAFFIC CONTROL WITHIN THEATER	
						CAPACITY	STORAGE ON HIGHWAY YES - NO	YES - NO	YES - NO	
Iowa	6	750	4			75	No	No	Yes	
	6	1200	4			180	No	No	Yes	
Kans	5	900	1	45min	30min					Congests adjacent intersections
	5	900	1	45min	30min	75	Yes	Yes		
	5	750	1	45min	30min	100	No	Yes		
	4	800	1	1 hr	40min	85	No	Yes	No	Causes reduction of normal speed of 15mph
	4	700	1	1 hr.	40min	100	Few	Yes		
Kent	4						No	Yes		Theater is located on left side of road out of town. Causes much congestion
							No	Yes		
							No	Yes		
							No			
							No	Yes		
							No	Yes		
Lou	5	500	1		20min	40	Yes	Yes	No	Sketch # 26
	5	350	2		20min	50	No	Yes	Yes	Sketch # 27
Mar	5	500	2		20min	small	Yes	Yes	Yes	Sketch # 28
		800	4			350	No			Under Construction
	4	500	2	1 hr.	20min	500	No	Yes	Yes	Sketch # 29 Much congestion
	6	300	2		20min	300	No	Yes		Sketch # 30
Mas	4½	600	2	1 hr.	15min	0	No	No	Yes	
	5	700	2	1½hr.	15min	0	No	No	Yes	Under Construction
	4	600	2	1½hr.	15min	0	No	No	Yes	
	4	800	2	1½hr.	15min	0	No	Yes	Yes	
	5	700	2	1 hr.	15min	200	No	No	Yes	
	5	450	2	1 hr.	30min	10	Yes	Yes	Yes	
	3½	350	2	1 hr.	15min	20	No	No	Yes	
	3½	1000	4			300	No	No		Under Construction
	3½	500	2	1 hr.	30min	50	No	No	Yes	
	3½	200	1	2 hr.	30min	30	No	Yes	Yes	
	3½	400	2	2 hr.	30min	25	No	No	Yes	
	3	500	2	2 hr.	30min	20	Yes	No	Yes	
	3	500	1	1 hr	10min	12	Yes	No	Yes	Highway median cut for crossover (*)
	3½	600	1	1 hr.	10min	30	Yes	No	Yes	(*)
	3½	100	1	1 hr.	5 min	4	Yes	No	Yes	(*)
	4½	362	1		7 min	50	No	No	Yes	(*)
	4	375	1		8 min	100	No	No	Yes	(*)
	6	572	1		7 min	0	No	No	Yes	(*)
	5	850	4		15min	400	No	No	Yes	Screen visible from road under constr. (*)
	5	375	1		15min	5	No	No	Yes	(*)
	5	450	2		10min	50	No	No	Yes	(*)

NATIONAL DRIVE-IN THEATER SURVEY

BY STATES-INDIVIDUAL THEATERS

CONDUCTED BY A.A.S.H.O. SUBCOMMITTEE ON ROADSIDE CONTROL

| STATE REPORTING | LOCATION: CITY OR NEAR | LOCATION: DISTANCE FROM | LOCATION: HIGHWAY: ROUTE NO | LOCATION: HIGHWAY: MAJOR | LOCATION: HIGHWAY: MINOR | LOCATION: HIGHWAY: SIDE ROAD | STATE AUTHORITY: LOCATION PERMIT (YES-NO) | STATE AUTHORITY: ACCESS PERMIT (YES-NO) | STATE AUTHORITY: CONTROL OF ACCESS & DESIGN (YES-NO) | STATE AUTHORITY: ACCESS PROHIBITED (YES-NO) | DATE BUILT | HIGHWAY DESIGN AT ACCESS: LANES | HIGHWAY DESIGN AT ACCESS: SURFACE | HIGHWAY DESIGN AT ACCESS: GRADES | HIGHWAY DESIGN AT ACCESS: SIGHT OBS | HIGHWAY DESIGN AT ACCESS: GRADE SEP. | ACCESS FACILITIES: ENTRY LANE: NO | ENTRY LANE: WIDTH | EXIT LANE: NO | EXIT LANE: WIDTH | CHANNELIZED (YES-NO) | HIGHWAY OPERATION AT ACCESS: VOLUME: 24 HOUR AVERAGE | VOLUME: 1 HOUR MAX | SPEED: NORMAL: 85% | SPEED: NORMAL: AT | SPEED: @ MAX HOUR: AT | SPEED: @ MAX HOUR: 85% | ACCIDENTS: PERIOD | ACCIDENTS: FATAL ACC. | ACCIDENTS: INJURY ACC. | ACCIDENTS: PROPERTY DAMAGE | ACCIDENTS: TYPE-NUMBER: TURNING IN | ACCIDENTS: TYPE-NUMBER: TURNING OUT | ACCIDENTS: TYPE-NUMBER: LOITERING | TRAFFIC CONTROL AT ACCESS: NONE | TRAFFIC CONTROL AT ACCESS: TRAFFIC SIGNAL (YES-NO) | TRAFFIC CONTROL AT ACCESS: OTHER | TRAFFIC CONTROL AT ACCESS: MANUAL: THEATER EMPLOYEES | TRAFFIC CONTROL AT ACCESS: MANUAL: CITY POLICE | TRAFFIC CONTROL AT ACCESS: MANUAL: STATE POLICE | LEFT TURN PERMITTED OUTBOUND (YES-NO) | THEATER OPERATION: NIGHTS OPERATED | THEATER OPERATION: HOURS OPERATED | THEATER OPERATION: CAPACITY | THEATER OPERATION: NO. OF TICKET GATES | THEATER OPERATION: TIME TO FILL | THEATER OPERATION: TIME TO EMPTY | THEATER OPERATION: STORAGE OUTSIDE OF GATE: CAPACITY | THEATER OPERATION: STORAGE OUTSIDE OF GATE: STORAGE ON RIGHT-OF-WAY (YES-NO) | THEATER OPERATION: GREATER NEAR CONGESTION | THEATER OPERATION: ADEQUATE TRAFFIC CONTROL WITHIN (YES-NO) | REMARKS |
|---|---|---

ST & REPCD	THEATER OPERATION									REMARKS
	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE		CREATES HY. CONGESTION	ADEQUATE TRAFFIC CONTROL WITHIN THEATER	
						CAPACITY	STORAGE ON HIGHWAY YES - NO	YES - NO	YES - NO	
Mal	3		1							
Mic	5	1000	2			500	No	No	Yes	
	4	650	2			300	No	No	Yes	
	2	200	1			10	No	No	Yes	Entrance doubles as exit
	4½	800	1	30min	15min	400	No	No	Yes	
	5	250	2	20min	10min	85	No	No	Yes	
	6	540	1	15min	10min	200	No	No	Yes	
	4½	400	2			70	No	No	Yes	
		200	2			60	No	No	Yes	
	5	750	2		17min	1¼4	No	Yes	No	
	4	750	2		10min	500	No	No	Yes	
	5	700	2			700	No	Some	Yes	
	6	1100	8		12min	140	Yes	Yes	Yes	Entrance being redesigned
	5	740	2		10min	300	No	No	Yes	Exits on side road
	4	500	1			200	No	No	Yes	Limit sight distance near entrance & exit
	6	575	2			100	Some	Yes	No	
	4½	750	2			250	No	No	Yes	
	4½	750	2			100	No	No	Yes	
	4	650	2			250	No	No	Yes	
		750	1			Ample	No	No	Yes	
		700	2	1 hr.	15min	100	No	No	Yes	
		850	2		9min	550	No	Some	Yes	
		650	2			150	No	Some	Yes	
	5½	1100	2	2 hr.	20min	105	Yes	Yes	No	
	5	750	4		15min	70	Yes	Yes	Yes	
	5	975	4	45min	15min	650	No	No	Yes	Screen visible from highway
	5½	220	1		10min	12	Yes	Yes	Yes	
Min	5½	662	2	45min	17min	300	No	No	Yes	(*)
	4	660	1	1½hr.	15min	200	No	No	Yes	(*)
Miss										Reply made no data
Miss	5	940	2	45min	15min	75	No	Yes	Yes	Sketch. More storage highway to gate
	5	980	2	45min	20min	110	No	No	Yes	Sketch. Conflict with left turn
	5	650	4	30min	9–15 min	50	No	No	Yes	Congestion on holidays
	6	800	4	2 hr.	15min	200	Yes			Congestion on blvd. to east (*)
	5	992	2	15min	10min	180	No	Yes	Yes	Sketch. "Traffic officer Ahead" sign
	5	670	3	2 hr.	15min.	500	No	Yes	Yes	" " " " "
	4	532	2	45min	15min	54	No		Yes	sketch, Red and green hand light.
	5	705	1	30min	15min	75	No	No	Yes	Sketch, Little difficulty
	4	538	1	1 hr.	30min	25	No	Yes	Yes	Congestion on US66 (*)
Mon							No			Less than 30 days operation to date.

NATIONAL DRIVE-IN THEATER SURVEY

BY STATES-INDIVIDUAL THEATERS

CONDUCTED BY A.A.S.H.O. SUBCOMMITTEE ON ROADSIDE CONTROL

STATE REPORTING	LOCATION: CITY OR NEAR	LOCATION: DISTANCE FROM	LOCATION: HIGHWAY: ROUTE NO	LOCATION: HIGHWAY: MAJOR	LOCATION: HIGHWAY: MINOR	LOCATION: HIGHWAY: OTHER	STATE AUTHORITY: LOCATION PERMIT (YES-NO)	STATE AUTHORITY: ACCESS PERMIT (YES-NO)	STATE AUTHORITY: CONTROL OF ACCESS DESIGN (YES-NO)	STATE AUTHORITY: ACCESS PROHIBITED (YES-NO)	DATE BUILT	HIGHWAY DESIGN AT ACCESS: LANES	HIGHWAY DESIGN AT ACCESS: SURFACE	HIGHWAY DESIGN AT ACCESS: GRADES	HIGHWAY DESIGN AT ACCESS: SIGHT DIS.	HIGHWAY DESIGN AT ACCESS: GRADE SEP.	ACCESS FACILITIES: ENTRY LANE: NO.	ENTRY LANE: WIDTH	EXIT LANE: NO.	EXIT LANE: WIDTH	CHANNELIZED	HIGHWAY OPERATION AT ACCESS: VOLUME: 24 HOUR BY DIRECTION	VOLUME: PEAK HOUR	SPEEDS: NORMAL: IN	SPEEDS: NORMAL: OUT	SPEEDS: @ SAME HOUR: IN 85%	SPEEDS: @ SAME HOUR: OUT 85%	ACCIDENTS: PERIOD	ACCIDENTS: FATAL ACC.	ACCIDENTS: INJURY ACC.	ACCIDENTS: PROPERTY DAMAGE	ACCIDENTS: TYPE - NUMBER: TURNING ON	ACCIDENTS: TYPE - NUMBER: TURNING OUT	ACCIDENTS: TYPE - NUMBER: LOITERING	SIGNS	TRAFFIC CONTROL AT ACCESS: TRAFFIC SIGNAL (YES-NO)	TRAFFIC CONTROL AT ACCESS: OTHER	TRAFFIC CONTROL AT ACCESS: MANUAL: THEATER EMPLOYEES	TRAFFIC CONTROL AT ACCESS: MANUAL: CITY POLICE	TRAFFIC CONTROL AT ACCESS: MANUAL: STATE POLICE	TRAFFIC CONTROL AT ACCESS: LEFT TURN PROHIBITED OR RESTRICTED (YES-NO)	THEATER OPERATION: NIGHTS OPERATED	THEATER OPERATION: HOURS OPERATED	THEATER OPERATION: CAPACITY	THEATER OPERATION: NO. OF TICKET BOOTHS	THEATER OPERATION: TIME TO FILL	THEATER OPERATION: TIME TO EMPTY	THEATER OPERATION: STORAGE OUTSIDE OF GATE: CAPACITY	THEATER OPERATION: STORAGE OUTSIDE OF GATE: STORAGE OFF PAVEMENT (YES-NO)	THEATER OPERATION: GREATER MV CONCENTRATION (YES-NO)	THEATER OPERATION: ADEQUATE TRAFFIC CONTROL WITHIN THEATER (YES-NO)	REMARKS
Maine	Saco		US1	X								4	Conc.	0-3							No	8900	600	45	50	35	50																									
Michigan	Flint		US10	X			No	Yes	Yes	No	'46	4	Conc.	0-3	-	No	1	30'	1	60'	Yes																															
	Bay City		M15	X			No	Yes	Yes	No	'48	2	BT	0-3		No	2	30'	1	30'	Yes	3600																															
	Adrian		US223	X			No	Yes	Yes	No		2	BT		Hill		1	30'	1	30'	No																															
	Lansing		US127	X			No	Yes	Yes	No	'48	8	Conc.		Hill		1	30'	1	30'	Yes	11500		37	43							1	1																			
	Addison	1½ mi.	US127	X			No	Yes	Yes	No	'48	2	Conc.	0-3			1	30'	1	30'	No																															
	Jackson	2 mi.	US12	X			No	Yes	Yes	No	'48	3	Conc.	0-3			2	30'	1	30'	Yes	9500																															
	Monroe		US25	X			No	Yes	Yes	No	'47	4	Conc	0-3	Trees		1	30'	1	30'	Yes							TO 8-48				1	1																			
	"		M130	X			No	Yes	Yes	No	'48	2	BT				1	30'	1	30'	No																															
	Pontiac		M 24	X			No	Yes	Yes	No	'48	2	Conc.				1	30'	1	30'	Yes	4800																															
	Flint		M 21	X			No	Yes	Yes	No -	'47	4	Conc.				2	30'	1	30'	Yes	8000																															
	Grand Rapids		US131	X			No	Yes	Yes	No	'48	2	Conc.				2	30'	2	30'	Yes	8000																															
	Mt. Clemens		US25	X			No	Yes	Yes	No	'47	80	Conc.				2	30' 40'	1	80'	Yes	13000																															
	Saginaw		US10	X			No	Yes	Yes	No	'48	2	Conc.				1	30'	2	30'	Yes	4400																															
	Adrian	1.8mi.	M 52	X			No	Yes	Yes	No	'48	2	Conc.				1	30'	1	30'	Yes	5000																															
	Ypsilanti		M 17	X			No	Yes	Yes	No	'48	3	BT				1	30'	1	30'								To 8-48				1		1																		
	Flint		US23	X			No	Yes	Yes	No	'48	4	Conc.				2	30'	2	30'		13000																															
	Saginaw		US10-23	X			No	Yes	Yes	No	'48	2	Conc.				1	30'	1	30'	Yes	7800																															
	Port Huron		US20A	X			No	Yes	Yes	No	'48	2	Conc.				3	30'	1	30'	Yes																															
	Niles	2 mi.	US31	X			No	Yes	Yes	No	'48	4	Conc.				2	30'	1	30'	Yes	8000		81	54																											
	Benton Harbor	1 mi.	M 139	X			No	Yes	Yes	No	'48	2	Conc.				1	30'	1	30'	Yes	8000		37	67																											
	Grand Rapids		US16	X			No	Yes	Yes	No	'48	2	Conc.				1	30'	1	30'	Yes	5000		37	42			6 mo.				1				1															
	Muskegon		US31	X			No	Yes	Yes	No	'47	2	Conc.				1	30'	1	30'	Yes							15mo.				2	2																			
	Dearborn		M153	X			No	Yes	Yes	No	'48	4	Conc.				1	45'	1	45'	No	7300		Zoned		85																										
	Oak Park		M 102	X			No	Yes	Yes	No	'38	80	Conc.				1	125'	1	100'	Yes			Zoned		60		6mo.				1		1																		
	Wyandotte		US25	X			No	Yes	Yes	No	'48	3	Conc.				1	50'	1	50'	Yes	9500		Zoned		60		1mo.				2	1			1															
	Hillsdale		M 99	X			No	Yes	Yes	No	'48	2	Conc.				1	33'	1	30'	Yes																															
Minnesota	St. Paul		SH51	X			No	Yes	Yes	No	5-'48	40		0-3			2	52'	2	52'	No	3825		80	50	80	85	1 mo.	0	0	0																						
	Minneapolis		TH100	X			No	Yes	Yes	No	7-'47	3	Conc.	0-3	Trees	No	2	100'	1	32'	No	6685		80	65	80		1 yr.	0	0	2	1				1																
Mississippi																																																	
Missouri	Kansas City		US71	X			Yes	Yes	Yes	No	'48	3	Conc.	0-3	Hill		2	30'	2	30'	Yes	5348	300	42	50	31	38																									
	W. Kansas City		US71	X			No	Yes	Yes	No	'48	4	Conc.	0-3	Curve		2	30'	2	35'	Yes	3698	325	43	51	35	45	8 mo.				1																			
	Kansas City		US40	X			No	Yes	Yes	No	'42	4	Conc.	4-6	Hill		3-6	80'	4	45'	Yes	5362	348	43	52	38	47																									
	DesPeres		US50	X			No	Yes	Yes	Yes	'40	4	BT Conc.	0-3	Curve	No	1	110'	1	110'	Yes	2966		80	68	80	68																									
	S. Dffton		US51	X			No	Yes	Yes	Yes	'48	4	Conc.	0-3			1	110'	2	50'	Yes	3838	350	42	50	80	68																									
	St. Louis		US66	X			No	Yes	Yes	Yes	'47	4	BT Conc.	0-3	Curve		8	220'	3	220'	Yes	10386	900	48	54	40	47																									
	St. Joseph		US71	X			No	Yes	Yes	No	7-'47	4	Conc.	4-6	Hill Curve		2	23'	1	36'	Yes	3267	225	42	50	30	48																									
	Springfield		RT. 0			X	No	Yes	Yes	No	8-'47	2	BT	0-3	Ro	No	1	100'	1	100'	No		730	50	37	50	37																									
	Joplin		US66	X				Yes	Yes	Yes		2	BT	0-3	Hill	No	2	20'	2	20'	No	500		48		40																									
Montana	Billings		US10	X			No	No	No	No	'48	2	BT	0-3		No	1	28'	1	18'	No	4031																													

⊕ DURING THEATER OPERATION

(*) Sketch submitted but not included

	THEATER OPERATION									
SCREENS OPERATED	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE		CREATES M.V. CONGESTION	ADEQUATE TRAFFIC CONTROL WITHIN THEATER	REMARKS
						CAPACITY	STORAGE ON HIGHWAY YES - NO	YES - NO	YES - NO	
Ne 7	4	500	2	45 min	25 min	200	No	Yes	Yes	(*)
7	4	750	6	45 min	32 min	50	Yes	Yes	Yes	Highway congested Saturday and Sunday (*)
7	4						No	No	Yes	Sketch. Co. zoned. Island cut prohibited
7	4½	676	2	1 Hr.	10 min	28	No	No	Yes	Co. zoned. (*)
Ne										Only two, in amusement parks.
He										
Ne 7	4½	750	4	45 min		100	No	Yes	Yes	
J 7	4½	800	4	30 min		750	No	No	Yes	
7	4	900	6	45 min		400	No	No	Yes	
7	4	650	2	45 min		40	No	Yes	Yes	
7	4	989	4	45 min		300	No	No	Yes	
7	4	500	4	45 min		125	No	No	Yes	
7	4	780	4	45 min		60	No	Yes	Yes	
7	4	650	4	45 min		125	No	Yes	Yes	
7	4	900	4	45 min		100	No	Yes	Yes	
Ne 7	5½	800	4	1 hr.	15 min	150	No	No	Yes	(*) No traffic difficulty due to design
Yo 7	4½	300	1		10min	20	No	No	Yes	Not capacity operated
7	4½	400	2		20min	30	No	No	Yes	Not capacity operated
7	4½	800	4	1 hr.	15min	50	No	No	Yes	(*) Still under construction
7	5	300	2	1 hr.	10 min	25	Yes	Yes	Yes	(*) Owners asking traffic aid
7	5	400	2	45min	15min	200	No	No	Yes	(*) Co. controlled permits
7	5	598	4	45min	15min	200	No	No	Yes	Sketch. 2 signals control turns
7	3½	215	1	45min	12min	60	No	No	No	
7	5½	700	2	1 hr.	15min	200	No	No	Yes	Sketch
7	4½	1000	4			300				(*) Not yet in operation
7	4	450	2	45min	30min	0	No	Yes	Yes	(*)
7	6	375	1	30min	20min	0	No	No	Yes	(*)
7	5	312	1	2½hr.	7min	25	No	No	Yes	(*)
7	4	440	1	45min	20min	0	No	No	Yes	(*)
2	3	350	1	20min	10min	0	No	No	Yes	(*)
7	5	350	2	30min	10min	0				Sketch
7	5	900	1	1 hr	30min	75	No	No	Yes	Sketch
7	5	110	1	45min.	15min	40	No	No	Yes	Sketch. Entry highway. Exit Co. Rd.
7	6	240	1	30min	20min	30	No	No	Yes	Sketch
7	4	862	4	2 hr	15min	50	Yes	Yes	Yes	Sketch
7	6	620	4	1 hr	10min	80	No	Yes	Yes	Sketch N.Y.C. Controls permit
7	7	580	2	1½hr	15min	50	Yes	Yes	Yes	
7	5									Screen visible from highway
7	5	300	1			20				Screen visible from highway
7	5	300	2		10min	50	No	No	Yes	
7	5	200	2							
7	5	398	2		15min	40	No	No	Yes	

NATIONAL DRIVE-IN THEATER SURVEY

BY STATES-INDIVIDUAL THEATERS

CONDUCTED BY A.A.S.H.O. SUBCOMMITTEE ON ROADSIDE CONTROL

STATE REPORTING	CITY OR NEAR	LOCATION: DISTANCE FROM	HIGHWAY: ROUTE NO.	HIGHWAY: MAJOR	HIGHWAY: MINOR	HIGHWAY: SIDE ROAD	STATE AUTHORITY: LOCATION PERMIT YES-NO	STATE AUTHORITY: ACCESS PERMIT YES-NO	STATE AUTHORITY: CONTROL OF ACCESS DESIGN YES-NO	STATE AUTHORITY: ACCESS PROHIBITED YES-NO	DATE BUILT	HIGHWAY DESIGN AT ACCESS: LANES	SURFACE	GRADES	SIGHT OBS.	GRADE SEP.	ACCESS FACILITIES: ENTRY LANE NO.	ENTRY LANE WIDTH	EXIT LANE NO.	EXIT LANE WIDTH	CHANNELIZED YES-NO	HIGHWAY OPERATION AT ACCESS: VOLUME 24 HOUR SYSTEM	VOLUME P.M. MAX HOUR	SPEED NORMAL DV	SPEED NORMAL 85%	SPEED P.M. MAX HOUR DV	SPEED P.M. MAX HOUR 85%	ACCIDENTS: PERIOD	ACCIDENTS: FATAL ACC.	ACCIDENTS: INJURY ACC.	ACCIDENTS: PROPERTY DAMAGE	ACCIDENTS: TYPE - NUMBER Pulling In	ACCIDENTS: TYPE - NUMBER Turning Out	ACCIDENTS: TYPE - NUMBER Lane Change	TRAFFIC CONTROL AT ACCESS: NONE	TRAFFIC SIGNAL YES-NO	TRAFFIC CONTROL AT ACCESS: OTHER	TRAFFIC CONTROL AT ACCESS: MANUAL Theater Employees	TRAFFIC CONTROL AT ACCESS: MANUAL City Police	TRAFFIC CONTROL AT ACCESS: MANUAL State Police	LEFT TURN PROHIBITED OR RESTRICTED YES-NO	THEATER OPERATION: RIGHTS OPERATED	THEATER OPERATION: HOURS OPERATED	THEATER OPERATION: CAPACITY	THEATER OPERATION: NO. OF TICKET BOOTHS	THEATER OPERATION: TIME TO FILL	THEATER OPERATION: TIME TO EMPTY	THEATER OPERATION: STORAGE OUTSIDE OF GATE Capacity	THEATER OPERATION: STORAGE OUTSIDE OF GATE Storage on In-Street YES-NO	THEATER OPERATION: GREATER NO. CONNECTION YES-NO	ADEQUATE TRAFFIC CONTROL WITHIN THEATER YES-NO	REMARKS
Nebraske	North Platte		U530	X			No	Yes	Yes	No	'40	2	Conc.	0-3			2	24'	1	12'		2400	500	45	52	39	44																									
	Omaha		U56	X			No	Yes	Yes	No	5-'46	4	Conc.	0-3		No	1	16'	1	16'		9050	630	32	39	29	36	8 Mo.			2		2																					
	Omaha		US73&75	X			No	No	No	No	8-'48	4D	Conc.	0-3			2	30'	1	16'		5380		42	50																													
	Lincoln		Vine St.			Co.	No	No	No	No	'48	2	Gr.	0-3	No	No	4	30'	4	30'	Yes																																
New Hampshire																																																			
New Jersey	Delaware Twp.		40	X	X		No	No	No	No	6-'46	4D	Conc.	0-3	Gld.	No	2	30'	2	30'	No	11407	1158			35																As needed	Some	7	4½	750	4	45 min		100	No	Yes	Yes	
	Paramus		4	X			No	No	No	No	8-'47	4D	Conc.	0-3		No	2	20'	2	20'	No	16000	1403		40		40																"	No	7	4½	800	4	30 min		750	No	No	Yes	
	Wall Twp		33-38	X		X	No	No	No	No	5-'48	2	Conc.	0-3		Traff Circle	6		5		Yes	4039	671		35																		"	No	7	4	900	6	45 min		800	No	No	Yes	
	Union Twp		29	X			No	No	No	No	'36	5D	Conc.	0-3	Bld.	No	2	20'	2	80	No		1851		40		35																"	No	7	4	650	2	45 min		40	No	Yes	Yes	
	Totowa		6	X			No	No	No	No	5-'48	6D	Conc.	0-3		Yes	4	20'	4	20'	No	8933	2181		45		45																"	No	7	4	989	4	45 min		300	No	No	Yes	
	Wall Twp		34	X			No	No	No	No	6-'48	2	Conc.	0-3		No	2	20'	2	20'	No	2659	763		45		45																"	Yes	7	4	880	4	45 min		125	No	No	Yes	
	Wood-Ridge Twp		25-4	X			No	No	No	No	9-'48	3-4	Conc.	0-3	Curve	Yes	4	75'	2	30'	No	34700	4724		35		15														X		No	7	4	780	4	45 min		60	No	Yes	Yes	
	Troy Hills		10	X			No	No	No	No	8-'47	3	Conc.	0-3		Yes	4	50'	3	25'	No	5195	625		45		35																"	Yes	7	4	650	4	45 min		125	No	Yes	Yes	
	Glu-Cester		45	X		X	No	No	No	No	6-'48	4D	Conc.	0-3	Curve	No	3	15'	2	20'	No	17310	1641		45																		"	Yes	7	4	900	4	45 min		100	No	Yes	Yes	
New York	Utica		SH205	X			Yes				'47	2	Conc.	0-3				60'		60'	No	3000	150					18 Mo.	5	0	0	0	0	0		Yes						Yes	7	5½	800	4	1 hr.	15 min	130	No	No	Yes	(*) No traffic difficulty due to design
	No City		US104	X			No	Yes	No	No	7-'47	2	Conc.	0-3			1	16'	1	16'	Yes	4500		40	45																	X		Yes	7	4½	300	1		10min	20	No	No	Yes	Not capacity operated
	Auburn		Rt.5	X			No	Yes	No	No	'47	3	Conc.	0-3	Curve	No	2	25'	1	15'	Yes	6000		40	45			1 Yr.													X		Yes	7	4½	400	2		20min	30	No	No	Yes	Not capacity operated
	Fulton		Rt.&D	X			No	Yes	No	No	7-'48	2	BT	0-3	No	No	4	40'	2	25'	Yes	2500		35	40			3Wk.	0	0	0	0	0	0		X							7	4½	800	4	1 hr.	15min	60	No	No	Yes	(*) Still under construction
	Lockport		Rt.78	X			No	Yes	Yes	No	'48	3	BT	0-3	No	No	2	12'	1	24'	No	5000	175	40		35		1Wk.	0	0	0	0	0	0									7	5	300	2	1 hr.	10 min	25	Yes	Yes	Yes	(*) Owners asking traffic aid
	Lacka-wanna		Lake St.			X	No	No	No	No	10-'47	2	Conc.	0-3	No	No	1	600'	3	11'	No	1000	250	35		35		11 Mo.	0	0	0	0	0	0				X					7	5	400	2	45min	15min	200	No	No	Yes	(*) Co. controlled permits
	Buffalo		Rt.5	X			No	Yes	Yes	No	6-'46	4	DT	0-3	Curve		4	11'	4	20'	No	8000	718	40		30		14 Mo.	0	0	0	0	0	0		Yes	So. Off.	X				Yes	7	5	598	4	45min	15min	200	No	No	Yes	Sketch. 2 signals control turns
	James-town		SH5245	X			No	Yes	Yes	No	7-'47	2		0-3	No			100'		40'	No	1500	125	40		35		14 Mo.	0	0	0	0	0	0				X	X			Yes	7	3½	215	1	45min	12min	60	No	No	No	
	Buffalo		CR353	X			No	No	No	No	'48	3	BT	0-3	Trees	No	2	12'	2	82'	No			35		30			0	0	0							X	X			Yes	7	5½	700	2	1 hr.	15min	200	No	No	Yes	Sketch
	Tona-wanda		Rt.384	X				Yes			'48	6	BT	0-3	No		4	12'	2	48'	No	10000	700	35					0	0	0						X	X				7	4½	1000	4			300				(*) Not yet in operation
	Albany		Rt.9	X			No	No	Yes	No	'41	3	BT	0-3			2	12'	2	12'	No	6000		40		40		43/48	0	0	0	0	0	0				X				Yes	7	4	450	2	45min	30min	0	No	Yes	Yes	(*)
	Hoosick		Rt.67		X		No	No	Yes	No	5-'48	2	Conc.	0-3	Curve		2	10'	2	10'	No	1000		40		40		4 Mo.	0	0	0	0	0	0				X				Yes	7	6	375	1	30min	20min	0	No	No	Yes	(*)
	Moreau				Spur		No	No	No	No	'45	2	BT	0		No	1	25'	1	22'	No																	X				Yes	7	5	312	1	2½hr.	7min	25	No	No	Yes	(*)
	Rensse-ger		Rt.9-20	X			No	No	Yes	No	'40	4	Conc.	0-3			2	10-12'	2	10-12'	No	16000		40		40		43/48	0	0	0	0	0	0				X				Yes	7	4	440	1	45min	20min	0	No	No	Yes	(*)
	Hudson		SH5073	X			No	No	Yes	No	'48	3	Conc.	0-3	No	No	2	10'	2	10'	No	2600	200	45	50			4 Mo.	0	0	0	0	0	0		X						Yes	2	3	330	1	20min	10min	0	No	No	Yes	(*)
	Middle-town		US6	X				No	Yes		'47	2	Conc.	0-3		No	2	20'	3	20'		2500	250	35		35		12 Mo.	0	0	0	0	0	0		X							7	5	336	2	30min	10min	0				Sketch
	Colonie		RT-5	X			No	No	Yes	No	'46	6D	BT	0-3			4	18'	4	12'	No	8000		40		40		2 Yr.	0	2	1	2	1	0					X	X		Yes	7	5	900	1	1 hr	30min	475	No	No	Yes	Sketch
	Leeds		Rt.23	X			No	No	Yes	No	'48	3	Conc.	0-3			2	18'	1	19'	No	3000		25	30	25	30	43/48	0	1	0	0	0	0		X		Stop				Yes	7	5	110	1	45min	15min	40	No	No	Yes	Sketch. Entry highway. Exit Co. Rd.
	Caldwell		Rt.9	X			No	No	Yes	No	'46	3	Conc.	0-3	No	No	1	21'	1	18'	No	8000		40		40		44/48	0	1	0	1	0	0					X				7	6	240	1	30min	20min	30	No	No	Yes	Sketch
	Valley Stream		Rt.27	X			No	Yes	No	No	8-'38	4	Conc.	0-3	Trees		1	25'	1	80'		10000	1200	35	40	33	40	48/48	1	3	7	12	0	0		Yes			X			Yes	7	4	852	4	2 hr	15min	30	Yes	Yes	Yes	Sketch
	Staten Is.		Rt.&&D	X			No	No	No	No	8-'47	6	CABT	0-3	No		2	40-55'	3	30-35'	Yes	15000	1500	30	35	30	35	10Mo.	1	1												Yes	7	6	620	4	1 hr	10min	60	No	Yes	Yes	Sketch N.Y.C. Controls permit
	Bingham-ton		Rt.17C	X			No	No	No	No	'45	4	Conc.	0-3	No		2	20'	2	20'	No	16000	1200	45	49	40	48	7 Mo.	0	2	3	1	2	0				Sher.					7	7	580	2	18hr	15min	50	Yes	Yes	Yes	
	Malone		Rt.11	X			No	No	No	No	5-'&0	2	Conc.	0-3								2798																		X				Yes	7	5									
	Platts-burg		Rt.3	X			No	No	No	No	5-'&0	2	Conc.	0-3								2093																		X														Screen visible from highway
	Alex. Bay		Rt.12	X			No	No	No	No	5-'48	2	Conc.	0-3				15'		15'	No	2400																		X				Yes	7	5	300	1			20				
	Water-town		Rt.11	X			No	No	No	No	5-'48	4	Conc.	0-3				50'		50'	No	3285						4 Mo.	0	0	0							X				Yes	7	5	300	2		10min	30	No	No	Yes	Screen visible from highway
	Ogdens-burg		Rt.37	X			No	No	No	No	5-'48	2	Conc.	0-3				30'		15'	No	2155																		X				Yes	7	5	200	2							
	Massena					Co.	No	No	No	No	5-'&0	2	BT	0-3				30'		20'	No							A Mo.	0	0	0							X					7	5	398	2		15min	40	No	No	Yes	

@ DURING THEATER OPERATION

(*) Sketch submitted but not included

	THEATER OPERATION									
	NIGHTS OPERATED	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE		CREATES HWY CONGESTION	ADEQUATE TRAFFIC CONTROL WITHIN THEATER	REMARKS
							CAPACITY	STORAGE ON HIGHWAY YES - NO	YES - NO	YES - NO	
Ne	7	5	540	2		15Min	100	No	No		Screen faces highway
(	7	5	202	2		½5Min	50	No	No	Yes	
											Under construction
	7	5	800	2	30Min	20Min	200	Yes	Yes	Yes	
	7	5	700	2	30Min	20Min	50	Yes	No	Yes	To be enlarged in '49
	7	5	600	2	30Min	20Min	300	Yes	No	Yes	
	7	4½	800	4		15Min	100	No	No	Yes	
	7	5	750	4		15Min	250	No	No		(*)
	7	4½	650	2	1 Hr.	15Min	350	Yes	Yes	Yes	Sketch
	7	4½	236	1	30Min	10Min	20	Yes	Yes	Yes	(*) Curve at each side theater
No Ca											Reply made. Data being collected
Oh	7	5	408	2		10Min	15	Yes	Yes	Yes	
	7	5	576	2		10Min	30	Yes	Yes	Yes	
	7	3½	535	2		10Min	50	No	Yes	Yes	
	7	6	1000	2	1 Hr.	30Min	40	Yes	Yes	No	
	6	4½	1000	2	1 Hr.	30Min	50	No	Yes		
	7	3½	150	1		10Min	20	No	No	Yes	
	7	6	520	2	2 Hr.	20Min	60	Yes	Yes	Yes	24 hour volume indefinate
	7	4½	360	2	1 Hr.	10Min	30			No	24 hour volume indefinate
	7	5	560	2	1 Hr.	10Min	50	No			24 hour volume indefinate
	7	4½	600	2	2 Hr.	20Min	215	No	Yes	Yes	24 hour volume indefinate
	7	4	500	1	1 Hr.	20Min	None	Yes	Yes	No	24 hour volume indefinate
	7	5½	500	2	2 Hr.	30Min	None	No	No	No	24 hour volume indefinate
	7	5½	250	1		20Min	30	No	No	Yes	24 hour volume indefinate
		4½			1 Hr.	1 Hr.		No	Yes		Front wide open for entrance or exit
		3			1 Hr.	1 Hr.		No	Yes	No	Through traffic slowed
	7	5	500	1			10	No	No	No	
	7	4	600	1			None	No		No	
	7	5½	432	1	2 Hr.	30Min	100	No	Yes	No	
	7	5½	280	1	1 Hr.	30Min	40	No	No	Yes	Front wide open for entrance or exit
	7	5	380	1	2 Hr.	30Min	50	No	No	Yes	
	7	6	468	2	2 Hr.	30Min	30	No	No	Yes	
	7	5	1000	2	2 Hr.	30Min	50	No	Yes		Erected before permit required
			500	1			30	No	Yes	No	Erected before permit required
	7	5	1000	2	2 Hr.	30Min	50	No	Yes		
	7	6	1000	2		15Min	60	No	No		(*)
	7	6	1000	2			80	No	No		(*)
	7	7	900	2			80	No	No	Yes	(*)
	7		1000	2			150				Under Construction
	7		1000	2			60	No			Not yet in operation
	7	4½	500	2	1½	20Min	0	No	No	Yes	(*)
	7	5	400	2	1½	15Min	0	Yes	No	Yes	(*)
	7	4	400	2	2 Hr.	20Min	150	No	No	Yes	(*)

NATIONAL DRIVE-IN THEATER SURVEY

BY STATES-INDIVIDUAL THEATERS

CONDUCTED BY A.A.S.H.O. SUBCOMMITTEE ON ROADSIDE CONTROL

STATE REPORTING	LOCATION: CITY IN OR NEAR	LOCATION: DISTANCE FROM	LOCATION: HIGHWAY: ROUTE NO.	LOCATION: HIGHWAY: MAJOR	LOCATION: HIGHWAY: MINOR	LOCATION: HIGHWAY: BUS ROUTE	STATE AUTHORITY: LOCATION PERMIT YES-NO	STATE AUTHORITY: ACCESS PERMIT YES-NO	STATE AUTHORITY: CONTROL OF ACCESS DESIGN YES-NO	STATE AUTHORITY: ACCESS PROHIBITED YES-NO	DATE BUILT	HIGHWAY DESIGN AT ACCESS: LANES	SURFACE	GRADES	SIGHT DIS.	GRADE SEP.	ACCESS FACILITIES: ENTRY LANE NO	ENTRY LANE WIDTH	EXIT LANE NO	EXIT LANE WIDTH	CHANNELIZED YES-NO	HIGHWAY OPERATION AT ACCESS: VOLUME: 24 HOUR AVERAGE	VOLUME: 1 HR MAX HOUR	SPEED: NORMAL: MPH	SPEED: NORMAL: 85%	SPEED: @ BUSY HOUR: MPH	SPEED: @ BUSY HOUR: 85%	ACCIDENTS: PERIOD	ACCIDENTS: FATAL ACC.	ACCIDENTS: INJURY ACC.	ACCIDENTS: PROPERTY DAMAGE	ACCIDENTS: TYPE - NUMBER: TURNING IN	ACCIDENTS: TYPE - NUMBER: TURNING OUT	ACCIDENTS: TYPE - NUMBER: LATERING	TRAFFIC CONTROL AT ACCESS: NONE	TRAFFIC SIGNAL YES-NO	TRAFFIC SIGNAL: OTHER	MANUAL: THEATER EMPLOYEES	MANUAL: CITY POLICE	MANUAL: STATE POLICE	LEFT TURN LANE PROVIDED OFF HIGHWAY YES-NO	THEATER OPERATION: RIGHTS OPERATED	THEATER OPERATION: HOURS OPERATED	THEATER OPERATION: CAPACITY	THEATER OPERATION: NO. OF TICKET BOOTHS	THEATER OPERATION: TIME TO FILL	THEATER OPERATION: TIME TO EMPTY	STORAGE OUTSIDE OF GATE: CAPACITY	STORAGE OUTSIDE OF GATE: STORAGE ON HIGHWAY YES-NO	GREATER HWY CONGESTION YES-NO	ADEQUATE TRAFFIC CONTROL DURING PEAK HOUR YES-NO	REMARKS
New York (Cont.)	Potsdam		Rt. 56	X			No	No	No	No	5-'48	2	BT	0-3				100'		30'	No	2110						12 Mo	0	0	0								X							

STATE REPORTING	THEATER OPERATION									REMARKS
	TS ATED	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE		CREATES HVY. CONGESTION	ADEQUATE TRAFFIC CONTROL WITHIN THEATER
							CAPACITY	STORAGE ON HIGHWAY YES - NO	YES - NO	YES - NO	
Ohio (Cont.	7	4	450	1	1 Hr.	15 Min	40	No	No	Yes	(*)
	7	4	700	2	1 Hr.	15 Min	40	No	No	Yes	(*)
	7	6	350	2	1 Hr.	10 Min	80	No	No	Yes	(*)
	7	6	740	2	2 Hr.	20 Min	50	No	No	Yes	(*)
	7	5	700	2	2 Hr.	15 Min	100	Yes	Yes	Yes	(*)
	7	4	600	2	1 Hr.	25 Min	100	No	No	Yes	(*)
	7	4	600	2	1 Hr.	15 Min	80	No	Yes	Yes	Congestion when leaving (*)
	7	4	400	2	1 Hr.	15 Min	80	No	No	Yes	(*)
	7	5	950	2	2 Hr.	15 Min	150	No	No	Yes	(*)
	7	5	385	2	1 Hr.	10 Min	80	No	No	Yes	(*)
Oklaho	6			1				No	No	Yes	(*)
	7	6		1				No	No	Yes	Sketch
	7	6		1				No	No	Yes	Sketch. On Co. Rd. just off U.S.62
Oregon	7	4½	584	2	1½ Hr.	60Min		Yes	No	Yes	(*)
	7	6	600	4	45 Min	11 Min	Unlimit	No	No	Yes	Sketch
	7	5	700	4	75 Min	10Min	200	Yes	No	Yes	Sketch
Penn-sylva											No problems as yet
Rhode Islan	7	4					0	No	Yes	No	
	7	4					0	No	Yes		
South Carol											25 or 30 theaters - Data later
South Dakot	7	4	120	1	30 Min	10Min	50	No	Yes	Yes	(*)
	7	4	150	1	30 Min	10Min	30	No	Yes	Yes	(*)
Texas											Numerous theaters - data later
Vermon											
Washin	7	5	692	2	1½ Hr.	12Min	120	No	No	Yes	Sketch
	7	5	646	2	1½ Hr.	12Min	140	No	No	Yes	Sketch
	7	3	300	1	25Min	30Min	200	No	No	Yes	
	7	5	700	2	1 Hr.	20Min	20	Yes	No		
	7	5	600		1 Hr.	15Min	60	Yes	Yes	Yes	Additional storage planned
	7	5	500	4	2 Hr.	15Min	60	No	No	Yes	Highway being widened to 4 lanes
	7	5	750	4	1 Hr.	20Min	200	No	No	Yes	
	7	5	700	1			60	No	No	Yes	(*)
	7	5	450	1			30	No	No	Yes	(*)
			600	2			300				(*)
			700				460	No	No		(*) Illuminated access

NATIONAL DRIVE-IN THEATER SURVEY
BY STATES-INDIVIDUAL THEATERS
CONDUCTED BY A.A.S.H.O. SUBCOMMITTEE ON ROADSIDE CONTROL

STATE REPORTING	LOCATION: CITY OR NEAR	LOCATION: DISTANCE FROM	LOCATION: HIGHWAY: ROUTE NO	LOCATION: HIGHWAY: MAJOR	LOCATION: HIGHWAY: MINOR	LOCATION: HIGHWAY: NOT ROAD	STATE AUTHORITY: LOCATION PERMIT YES-NO	STATE AUTHORITY: ACCESS PERMIT YES-NO	STATE AUTHORITY: CONTROL OF ACCESS DESIGN YES-NO	STATE AUTHORITY: ACCESS PROHIBITED YES-NO	DATE BUILT	HIGHWAY DESIGN AT ACCESS: LANES	SURFACE	GRADES	DIRT OBS.	GRADE SEP.	ACCESS FACILITIES: ENTRY LANE NO.	ENTRY LANE WIDTH	EXIT LANE NO.	EXIT LANE WIDTH	CHANNELIZED YES-NO	HIGHWAY OPERATION AT ACCESS: VOLUME 24 HOUR AVERAGE	VOLUME @ MAX HOUR	SPEED NORMAL 24	SPEED NORMAL 85 %	SPEED @ MAX HOUR 24	SPEED @ MAX HOUR 85 %	ACCIDENTS: PERIOD	ACCIDENTS: FATAL ACC.	ACCIDENTS: INJURY ACC.	ACCIDENTS: PROPERTY DAMAGE	ACCIDENTS: TYPE - BURGESS: TURNING IN	ACCIDENTS: TYPE - BURGESS: TURNING OUT	ACCIDENTS: TYPE - BURGESS: LISTENING	TRAFFIC CONTROL AT ACCESS: NONE	TRAFFIC CONTROL AT ACCESS: TRAFFIC SIGNAL YES-NO	TRAFFIC CONTROL AT ACCESS: OTHER	TRAFFIC CONTROL AT ACCESS: MANUAL: THEATER EMPLOYEES	TRAFFIC CONTROL AT ACCESS: MANUAL: CITY POLICE	TRAFFIC CONTROL AT ACCESS: MANUAL: STATE POLICE	LEFT TURN STORAGE PROVIDED WITHIN THEATER YES-NO	THEATER OPERATION: NIGHTS OPERATED	THEATER OPERATION: HOURS OPERATED	THEATER OPERATION: CAPACITY	THEATER OPERATION: NO. OF TICKET BOOTHS	THEATER OPERATION: TIME TO FILL	THEATER OPERATION: TIME TO EMPTY	THEATER OPERATION: STORAGE OUTSIDE OF GATE: CAPACITY	THEATER OPERATION: STORAGE OUTSIDE OF GATE: STORAGE ON HIGHWAY YES-NO	THEATER OPERATION: GREATER HOURLY CONGESTION YES-NO	THEATER OPERATION: ALTERNATE TRAFFIC CONTROL WITHIN THEATER YES-NO	REMARKS
Ohio (Cont.)	Kandlington	3 S	SR8	X			-				'55	2	BT	4-6	No	No	2	10'	1	20'	No	8962						3 Yr.	0	3	8	1	0	6																			
	Cincinnati	2 E	SR125	X				Yes			'49	2	Conc.	0-3	Curve		2	10'	2	10'	Yes							4 Mo.	0	0	0					Ranger																
	Dayton		US35	X							'46	3	BT	0-3	No	No	2		4			5700						2 Yr.	0	0	1		1		X					Yes	7	6	350	2	1 Hr.	10 Min	80	No	No	Yes	(*)
	"	4 S	US25	X							'45	4D	BT	0-3	No	No	2	12'	2	12'		8750						3 Yr.	0	0	1		1				X			No	7	6	740	2	2 Hr.	20 Min	50	No	No	Yes	(*)
	"	1 W	SR69	X			Yes				'41	2	BT	0-3	No	No	2	12'	2	12'	No	6100						3 Yr.	0	0	3	2	1	0			X			Yes	7	5	700	2	2 Hr.	15 Min	100	Yes	Yes	Yes	(*)
	Woodlawn		SR4	X			No	No	No	No		4	BT	0-3	No	No	2	30'	1	24'	Yes															X	X		Yes	7	4	600	2	1 Hr.	25 Min	100	No	No	Yes	(*)
	Montgomery	US22	US22	X			No	No	No	40	'56	4	Conc.	0-3	No	No	2	12'	2	12'	Yes															X				7	4	600	2	1 Hr.	15 Min	80	No	Yes	Yes	Congestion when leaving (*)
	Bethel	6 W	US125	X								2	BT	0-3	No	No	2	18'	2	18'	Yes	1580															X				7	4	400	2	1 Hr.	15 Min	80	No	No	Yes	(*)
	Dayton	1 W	US35	X								3	BT	0-3	No	No	2	12'	2	12'	Yes	5700																			7	5	950	2	2 Hr.	15 Min	150	No	No	Yes	(*)
	"	4 N	SR49	X								4	Conc.	0-3	No	No	2	20'	2	20'	Yes	9000																			7	5	385	2	1 Hr.	10 Min	60	No	No	Yes	(*)
Oklahoma	Oklahoma City		US77	X			No	No	No	No	'47	2	BT	0-3	Signs Trees	No	1	72'	1	32'	Yes	6098															X		X	Yes	7	6		1				No	No	Yes	(*)
	Oklahoma City		SR3	X			No	No	No	No	'47	4D	Conc.	0-3	No	No	1	36'	1	32'	Yes	1343															X			No	7	6		1				No	No	Yes	Sketch
	Oklahoma City					Co.	No	No	No	No	'47	2	BT	0-3	Hill	No	2	36'	1	42'	Yes	488															X		X	Yes	7	6		1				No	No	Yes	Sketch. On Co. Rd. just off U.S.62
Oregon	Salem		US99E	X			No	Yes	Yes	No	6-'48	2	BT	0-3		No	2	12'	1	18'	No	7250		48	55												X			Yes	7	4½	584	2	1½ Hr.	40 Min		Yes	No	Yes	(*)
	Portland		US99	X			No	No	No	No	'47	3	BT	0-3		No	2	21'	2	21'	No	17060		35				1 Yr.	0	0	5	0	8	1	X					Yes	7	6	600	8	65 Min	11 Min	Unlimit	No	No	Yes	Sketch
	Portland		0213	X			No	Yes	Yes	No	3-'48	2	BT	0-3		No	8	12'	3	12'	No	6140	350	32	38			2 Mo.		3			3				X			Yes	7	5	700	8	75 Min	10 Min	200	Yes	No	Yes	Sketch
Pennsylvania																																																		No problem as yet
Rhode Island	Providence		US1	X			Yes	No	No	No	'36	4D	BT									27500	1700	25		25														Yes	7	4					0	No	Yes	No	
	Cranston		Greenwich Ave	X			Yes	No	No	No	'48	4D	C&BT		Curve							6000	800	35		35												X	X	Yes	7	4					0	No	Yes		
South Carolina																																																		25 or 30 theaters - Data later
South Dakota	Watertown		SD20		X		Yes	Yes	Yes	Yes	5-'48	2	BT	0-3	Curve		1	30'				674	120	40		30		A Mo.	0	0	X	X	0	0				X			Yes	7	4	120	1	30 Min	10 Min	30	No	Yes	Yes	(*)
	Sioux Falls		US77	X			Yes	Yes	Yes	Yes	5-'47	2	Conc.	0-3	Curve		2	24'	3	24'		2797	500	50		40												X			Yes	7	4	150	1	30 Min	10 Min	30	No	Yes	Yes	(*)
Texas																																																		Numerous theaters - data later
Vermont	Burlington		RT127		X							2	BT	0-3								500																	X													
	Rutland		US7	X								2	BT	0-3								4100																	X													
Washington	Tacoma		US99	X				Yes	Yes	Yes	'47	4D	Conc.	0-3	Curve	No	2	30'	1	30'	No																		Yes	7	5	692	2	1½ Hr.	12 Min	120	No	No	Yes	Sketch
	Tacoma		US99	X				Yes	Yes	Yes	'47	4	BT	0-3	No	No	3	10'	2	15'	No																X			Yes	7	5	646	2	1½ Hr.	12 Min	140	No	No	Yes	Sketch
	Wenatchee		US2,97	X			No	Yes	Yes	No	9-'47	2	Conc.	0-3	No	No	1	24'	1	24'	No	20000	3600	30	35	30	38												X			Yes	7	3	309	1	25 Min	30 Min	200	No	No	Yes	
	Wells Manufacturing		Melrose A.			Co.					'46	2	BT	0-3			2	10'	2	10'	No	1060	100	35	40	35	40									X					Yes	7	5	700	2	1 Hr.	20 Min	20	Yes	No		
	Kennewick		PSH8	X				Yes	Yes		'48	2	BT	0-3			2	10'	4	10'	No	3000	250	35	45	35	45				X		X	X	X					Yes	7	5	600		1 Hr.	15 Min	60	Yes	Yes	Yes	additional storage planned
	Kennewick			X				Yes	Yes		7-'47	2	Conc.	0-3			8	12'	6	12'	No	10000	700	35	45	35	45				X		X		X					Yes	7	5	500	4	2 Hr.	15 Min	60	No	No	Yes	Highway being widened to 6 lanes
	Yakima		PSH3	X				Yes	Yes		'48	4D	Conc.	0-3			8	10'	2	10'		13000	900	40	45	40	50									X					Yes	7	5	750	8	1 Hr.	20 Min	200	No	No	Yes	
	Spokane	6 N.	US195	X			Yes	Yes	Yes		1-'46	4D	Conc.	0-3			2	10'	3	12'16'	Yes	4023	200	43	40	41	45	24Mo.			1											7	5	700	1			60	No	No	Yes	(*)
	Spokane	4 & 8E	SSH-2H		X		Yes	Yes	Yes	No	'46	2	CABT	0-3	Trees		2	20'	3	20'	Yes	4700	290	37	41	35	37	24Mo.			1			1							7	5	650	1			30	No	No	Yes	(*)
	Everett		US99	X				Yes	Yes		'47	4D	Conc.	0-3			1	15'	1	15'	Yes	9000		50															X	Yes			800	2			300				(*)
	Seattle		US99	X				Yes	Yes		'47	4D	Conc	0-3			1	15'	1	15'	Yes	18000						47/48	0	0									X	Yes			700				460	46	No		(*) Illuminated access

@ Drive-in theater operation

(*) Sketch submitted but not included

STATES REPORTED	THEATER OPERATION									REMARKS
	HOURS OPERATED	CAPACITY	NO. OF TICKET GATES	TIME TO FILL	TIME TO EMPTY	STORAGE OUTSIDE OF GATE		CREATES HY CONGESTION	ADEQUATE TRAFFIC CONTROL WITHIN THEATER	
						CAPACITY	STORAGE ON HIGHWAY YES - NO	YES - NO	YES - NO	
Was (Co										
			2				Yes	Yes		New Construction for storage
			2				Yes	Yes		Requested to increase storage
	7	5	900	6		20Min	100	No	No	Yes	No. Acc. exper. signal at exit
Wis	7	4	635	2			25	No	No	Yes	No. acc. exper.
	7	4	450	4		15Min	40	No	No	Yes	Acc. rec. not available
			400	1				No			(*) Proposed 1948 City controls permit
Haw										

NATIONAL DRIVE-IN THEATER SURVEY
BY STATES-INDIVIDUAL THEATERS
CONDUCTED BY ~~A.A.S.H.O.~~ SUBCOMMITTEE ON ROADSIDE CONTROL

STATE REPORTING	LOCATION: CITY IN OR NEAR	LOCATION: DISTANCE FROM	LOCATION: HIGHWAY: ROUTE NO.	LOCATION: HIGHWAY: MAJOR	LOCATION: HIGHWAY: MINOR	LOCATION: HIGHWAY: ROAD NAME	STATE AUTHORITY: LOCATION PERMIT YES-NO	STATE AUTHORITY: ACCESS PERMIT YES-NO	STATE AUTHORITY: CONTROL OF ACCESS DESIGN YES-NO	STATE AUTHORITY: ACCESS PROHIBITED YES-NO	DATE BUILT	HIGHWAY DESIGN AT ACCESS: LANES	SURFACE	GRADES	SIGHT OBS	GRADE SEP.	ACCESS FACILITIES: ENTRY LANE NO	ENTRY LANE WIDTH	EXIT LANE NO	EXIT LANE WIDTH	CHANNELIZED YES-NO	HIGHWAY OPERATION AT ACCESS: VOLUME PER HOUR AVERAGE	VOLUME PER MAX HOUR	SPEED NORMAL AV	SPEED NORMAL 85%	SPEED 15 MAX HOUR AV	SPEED 15 MAX HOUR 85%	ACCIDENTS PERIOD	ACCIDENTS FATAL ACC.	ACCIDENTS INJURY ACC.	ACCIDENTS PROPERTY DAMAGE	ACCIDENTS TYPE - NUMBER TURNING IN	ACCIDENTS TYPE - NUMBER TURNING OUT	ACCIDENTS TYPE - NUMBER LEFTERIES	TRAFFIC CONTROL AT ACCESS: NONE	TRAFFIC CONTROL AT ACCESS: TRAFFIC SIGNAL YES-NO	TRAFFIC CONTROL AT ACCESS: OTHER	TRAFFIC CONTROL AT ACCESS: MANUAL: THEATER EMPLOYEES	TRAFFIC CONTROL AT ACCESS: MANUAL: CITY POLICE	TRAFFIC CONTROL AT ACCESS: MANUAL: STATE POLICE	TRAFFIC CONTROL AT ACCESS: LEFT TURN PROHIBITED OR CONTROLLED YES-NO	THEATER OPERATION: NIGHTS OPERATED	THEATER OPERATION: HOURS OPERATED	THEATER OPERATION: CAPACITY	THEATER OPERATION: NO. OF TICKET GATES	THEATER OPERATION: TIME TO FILL	THEATER OPERATION: TIME TO EMPTY	THEATER OPERATION: STORAGE: CAPACITY	THEATER OPERATION: STORAGE OUTSIDE OF GATE: STORAGE ON HIGHWAY YES-NO	THEATER OPERATION: GREATER HWY CONGESTION YES-NO	THEATER OPERATION: ADEQUATE TRAFFIC CONTROL WITHIN PROPERTY YES-NO	REMARKS
Washington (Cont.)	Bellingham					Co.				Yes	'47	2	Conc.									4600											X											
	Midway		US99	X							'42	4D	Conc.	D-3	V. Curve		2		1		No	15000		50																							New Construction for storage
	Seattle	2 No.	US99	X								4	CABT	D-3				60'		60'	No	20000																							Requested to increase storage
Wisconsin	Milwaukee		US41	X			No	Yes	Yes	No	'38	8D	Conc.	D-3	No	No	a	15'	2	15'		14000	2600	50	55	50	55												Yes				No	7	5	900	6		20Min	100	No	No	Yes	No. Acc. exper. signal at exit
	Madison		US51	X			No	Yes	Yes	No		2	Conc.	D-3	No	No	2	15'	2	15'	No	2500	500	48	61														X				7	4	635	2			25	No	No	Yes	No. Acc. exper.
	Milwaukee		US18	X			No	Yes	Yes	No	'41	4D	Conc.	D-3	Hill	No	a		4		No	10000	2000	50	62			12No.									Co. Sh.				No	7	H	450	8		45Min	40	No	No	Yes	Acc. rec. not available
Hawaii	Honolulu		Kapiolani	X			Yes	No	No	No	Pre-1948	4	BT	D-3	Bldg.	No	3	12'	6	10'	No	30000	2000	35													X				Yes			400	1			No				(*) Proposed 1948 City controls permit

& DURING THEATER OPERATION

(*) Sketch submitted but not included

Date Due

DEC 7 '78	7 '78		

Policy on drive-in theaters / sci
711.7A512p
3 1262 03444 8208